SEQUENCE LISTING

<110> Havenga, Menzo

<120> Chimeric Adenoviruses

<130> 2183-4123us

<140> 09/348,354
<141> 1999-07-07

<160> 85

<170> PatentIn Ver. 2.1

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<213> Human Adenovirus Oligonucleotide

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cccgtgtatc catatgatgc agacaacgac cgacc 35

<210> 2
<211> 27
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<213> Human Adenovirus Oligonucleotide

<400> 2
cccgtctacc catatggcta cgcgcgg 27

<210> 3
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<213> Human Adenovirus Oligonucleotide

<400> 3
cckgtstacc catatgaaga tgaaagc 27

<210> 4
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<213> Human Adenovirus Oligonucleotide

<400> 4
cccgtctacc catatgacac ctyctcaact c 31

<210> 5
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<212> DNA
<213> Human Adenovirus Oligonucleotide

<400> 5
cccgtttacc catatgaccc atttgacaca tcagac 36

<210> 6
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<212> DNA
<213> Human Adenovirus Oligonucleotide

<400> 6
ccgatgcatt tattgttggg ctatatagga 30

<210> 7
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<212> DNA
<213> Human Adenovirus Oligonucleotide

<400> 7
ccgatgcatt yattcttggg cratatagga 30

<210> 8
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<212> DNA
<213> Human Adenovirus Oligonucleotide

<400> 8
ccgatgcatt tattcttggg raatgtawga aaagga 36

<210> 9
<211> 30
<212> DNA

<213> Human Adenovirus Oligonucleotide

<400> 9
ccgatgcatt cagtcatctt ctctgatata 30

<210> 10
<211> 30
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<400> 10
ccgatgcatt tattgttcag ttatgtagca 30

<210> 11
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<212> DNA
<213> Human Adenovirus Oligonucleotide

<400> 11
gccatgcatt tattgttctg ttacataaga 30

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<213> Human Adenovirus Oligonucleotide

<400> 12
ccgttaatta agcccttatt gttctgttac ataagaa 37

<210> 13
<211> 30
<212> DNA
<213> Human Adenovirus Oligonucleotide

<400> 13
ccgatgcatt cagtcatcyt ctwtaatata 30

<210> 14
<211> 377
<212> PRT

<213> Human Adenovirus 8 Fiber Protein

<400> 14

Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
35 40 45

Ser Ser Asn Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asp Pro Ile Thr Ile Asn Asn Gln Asn Val Ser Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Leu Gln Glu Glu Thr Gly Lys Leu Thr Val Asn
85 90 95

Thr Glu Pro Pro Leu His Leu Thr Asn Asn Lys Leu Gly Ile Ala Leu
100 105 110

Asp Ala Pro Phe Asp Val Ile Asp Asn Lys Leu Thr Leu Leu Ala Gly
115 120 125

His Gly Leu Ser Ile Ile Thr Lys Glu Thr Ser Thr Leu Pro Gly Leu
130 135 140

Val Asn Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Asp Leu
145 150 155 160

Ser Asn Asn Gly Gly Asn Ile Cys Val Arg Val Gly Glu Gly Gly Gly
165 170 175

Leu Ser Phe Asn Asp Asn Gly Asp Leu Val Ala Phe Asn Lys Lys Glu
180 185 190

Asp Lys Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Arg
195 200 205

Ile Asp Gln Asp Lys Asp Ser Lys Leu Ser Leu Val Leu Thr Lys Cys
210 215 220

Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Val Val Ala Gly Arg
225 230 235 240

Tyr Lys Ile Ile Asn Asn Asn Thr Asn Pro Ala Leu Lys Gly Phe Thr
245 250 255

Ile Lys Leu Leu Phe Asp Lys Asn Gly Val Leu Met Glu Ser Ser Asn
260 265 270

Leu Gly Lys Ser Tyr Trp Asn Phe Arg Asn Gln Asn Ser Ile Met Ser
275 280 285

Thr Ala Tyr Glu Lys Ala Ile Gly Phe Met Pro Asn Leu Val Ala Tyr
290 295 300

Pro Lys Pro Thr Thr Gly Ser Lys Lys Tyr Ala Arg Asp Ile Val Tyr
305 310 315 320

Gly Asn Ile Tyr Leu Gly Gly Lys Pro His Gln Pro Val Thr Ile Lys
325 330 335

Thr Thr Phe Asn Gln Glu Thr Gly Cys Glu Tyr Ser Ile Thr Phe Asp
340 345 350

Phe Ser Trp Ala Lys Thr Tyr Val Asn Val Glu Phe Glu Thr Thr Ser
355 360 365

Phe Thr Phe Ser Tyr Ile Ala Gln Glu
370 375

<210> 15
<211> 376
<212> PRT
<213> Human Adenovirus 9 Fiber Protein

<400> 15
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
35 40 45

Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asp Pro Ile Ala Ile Val Asn Gly Asn Val Ser Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Leu Gln Asp Gly Thr Gly Lys Leu Thr Val Asn
85 90 95

Ala Asp Pro Pro Leu Gln Leu Thr Asn Asn Lys Leu Gly Ile Ala Leu
100 105 110

Asp Ala Pro Phe Asp Val Ile Asp Lys Leu Thr Leu Leu Ala Gly His
115 120 125

Gly Leu Ser Ile Ile Thr Lys Glu Thr Ser Thr Leu Pro Gly Leu Ile
130 135 140

Asn Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Glu Ser Thr
145 150 155 160

Asp Asn Gly Gly Ser Val Cys Val Arg Val Gly Glu Gly Gly Gly Leu
165 170 175

Ser Phe Asn Asn Asp Gly Asp Leu Val Ala Phe Asn Lys Lys Glu Asp
180 185 190

Lys Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Lys Ile
195 200 205

Asp Gln Asp Lys Asp Ser Lys Leu Thr Leu Val Leu Thr Lys Cys Gly
210 215 220

Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Val Val Ala Gly Lys Tyr
225 230 235 240

Lys Ile Ile Asn Asn Asn Thr Gln Pro Ala Leu Lys Gly Phe Thr Ile
245 250 255

Lys Leu Leu Phe Asp Glu Asn Gly Val Leu Met Glu Ser Ser Asn Leu
260 265 270

Gly Lys Ser Tyr Trp Asn Phe Arg Asn Glu Asn Ser Ile Met Ser Thr
275 280 285

Ala Tyr Glu Lys Ala Ile Gly Phe Met Pro Asn Leu Val Ala Tyr Pro
290 295 300

Lys Pro Thr Ala Gly Ser Lys Lys Tyr Ala Arg Asp Ile Val Tyr Gly
305 310 315 320

Asn Ile Tyr Leu Gly Gly Lys Pro Asp Gln Pro Val Thr Ile Lys Thr
325 330 335

Thr Phe Asn Gln Glu Thr Gly Cys Glu Tyr Ser Ile Thr Phe Asp Phe
340 345 350

Ser Trp Ala Lys Thr Tyr Val Asn Val Glu Phe Glu Thr Thr Ser Phe
355 360 365

Thr Phe Ser Tyr Ile Ala Gln Glu
370 375

<210> 16
<211> 391
<212> PRT
<213> Human Adenovirus 13 Fiber Protein

<400> 16
Xaa Xaa Xaa Xaa Xaa Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Ser Ser Xaa Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Xaa Phe Xaa Thr Pro Pro Phe Val
35 40 45

Xaa Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asp Pro Ile Thr Ile Ala Asn Gly Asp Val Ser Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Leu Gln Glu Gly Ser Leu Thr Val Asp Pro Lys
85 90 95

Ala Pro Leu Gln Leu Ala Asn Asp Lys Lys Leu Glu Leu Val Tyr Asp
100 105 110

Asp Pro Phe Glu Val Ser Thr Asn Lys Leu Ser Leu Lys Val Gly His
115 120 125

Gly Leu Lys Val Leu Asp Asp Lys Ser Ala Gly Gly Leu Lys Asp Leu
130 135 140

Ile Gly Lys Leu Val Val Leu Thr Gly Lys Gly Ile Gly Ile Glu Asn
145 150 155 160

Leu Gln Asn Asp Asp Gly Ser Ser Arg Gly Val Gly Ile Asn Val Arg
165 170 175

Leu Gly Thr Asp Gly Gly Leu Ser Phe Asp Arg Lys Gly Glu Leu Val
180 185 190

Ala Trp Asn Arg Lys Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp
195 200 205

Pro Ser Pro Asn Cys Lys Ala Glu Thr Glu Lys Asp Ser Lys Leu Thr
210 215 220

Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Thr Val Ser Ile
225 230 235 240

Ile Val Leu Lys Gly Lys Tyr Glu Phe Val Lys Lys Glu Thr Glu Pro
245 250 255

Lys Ser Phe Asp Val Lys Leu Leu Phe Asp Ser Lys Gly Val Leu Leu
260 265 270

Pro Thr Ser Asn Leu Ser Lys Glu Tyr Trp Asn Tyr Arg Ser Tyr Asp
275 280 285

Asn Asn Ile Gly Thr Pro Tyr Glu Asn Ala Val Pro Phe Met Pro Asn
290 295 300

Leu Lys Ala Tyr Pro Lys Pro Thr Lys Thr Ala Ser Asp Lys Ala Glu
305 310 315 320

Asn Lys Ile Ser Ser Ala Lys Asn Lys Ile Val Ser Asn Phe Tyr Phe
325 330 335

Gly Gly Gln Ala Tyr Gln Pro Gly Thr Ile Ile Ile Lys Phe Asn Glu
340 345 350

Glu Ile Asp Glu Thr Cys Ala Tyr Ser Ile Thr Phe Asn Phe Gly Trp
355 360 365

Gly Lys Val Tyr Asp Asn Pro Glu Pro Phe Asp Thr Thr Ser Phe Thr
370 375 380

Xaa Ser Tyr Ile Ala Gln Glu
385 390

<210> 17
<211> 290
<212> PRT
<213> Human Adenovirus 14 Fiber Protein

<400> 17
His Pro Phe Ile Asn Pro Gly Phe Ile Ser Pro Asn Gly Phe Thr Gln
1 5 10 15

Ser Pro Asp Gly Val Leu Thr Leu Lys Cys Leu Thr Pro Leu Thr Thr
20 25 30

Thr Gly Gly Ser Leu Gln Leu Lys Val Gly Gly Gly Leu Thr Val Asp
35 40 45

Asp Thr Asp Gly Thr Leu Gln Glu Asn Ile Gly Ala Thr Thr Pro Leu
50 55 60

Val Lys Thr Gly His Ser Ile Gly Leu Ser Leu Gly Ala Gly Leu Gly
65 70 75 80

Thr Asp Glu Asn Lys Leu Cys Thr Lys Leu Gly Glu Gly Leu Thr Phe
85 90 95

Asn Ser Asn Asn Ile Cys Ile Asp Asp Asn Ile Asn Thr Leu Trp Thr
100 105 110

Gly Val Asn Pro Thr Glu Ala Asn Cys Gln Met Met Asp Ser Ser Glu
115 120 125

Ser Asn Asp Cys Lys Leu Ile Leu Thr Leu Val Lys Thr Gly Ala Leu
130 135 140

Val Thr Ala Phe Val Tyr Val Ile Gly Val Ser Asn Asn Phe Asn Met
145 150 155 160

Leu Thr Thr Tyr Arg Asn Ile Asn Phe Thr Ala Glu Leu Phe Phe Asp
165 170 175

Ser Ala Gly Asn Leu Leu Thr Ser Leu Ser Ser Leu Lys Thr Pro Leu
180 185 190

Asn His Lys Ser Gly Gln Thr Trp Leu Leu Val Pro Leu Leu Met Leu
195 200 205

Lys Val Ser Cys Pro Ala Gln Leu Leu Ile Leu Ser Ile Ile Ile Leu
210 215 220

Glu Lys Asn Lys Thr Thr Phe Thr Glu Leu Val Thr Thr Gln Leu Val
225 230 235 240

Ile Thr Leu Leu Phe Pro Leu Thr Ile Ser Val Met Leu Asn Gln Arg
245 250 255

Ala Ile Arg Ala Asp Thr Ser Tyr Cys Ile Arg Ile Thr Trp Ser Trp
260 265 270

Asn Thr Gly Asp Ala Pro Glu Gly Gln Thr Ser Ala Thr Thr Leu Val
275 280 285

Thr Ser
290

<210> 18
<211> 344
<212> PRT
<213> Human Adenovirus 20 Fiber Protein

<400> 18
Ile Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly
1 5 10 15

Leu Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro
20 25 30

Ile Ala Ile Val Asn Gly Asn Val Ser Leu Lys Val Gly Gly Gly Ile
35 40 45

Thr Val Glu Gln Asp Ser Gly Gln Leu Ile Ala Asn Pro Lys Ala Pro
50 55 60

Leu Gln Val Ala Asn Asp Lys Leu Glu Leu Ser Tyr Ala Tyr Pro Phe
65 70 75 80

Glu Thr Ser Ala Asn Lys Leu Ser Leu Lys Val Gly Gln Gly Leu Lys
85 90 95

Val Leu Asp Glu Lys Asp Ser Gly Gly Leu Gln Asn Leu Leu Gly Lys
100 105 110

Leu Val Val Leu Thr Gly Lys Gly Ile Gly Val Glu Glu Leu Lys Asn
115 120 125

Pro Asp Asn Thr Asn Arg Gly Val Gly Ile Asn Val Arg Leu Gly Lys
130 135 140

Asp Gly Gly Leu Ser Phe Asn Lys Asn Gly Glu Leu Val Ala Trp Asn
145 150 155 160

Lys His Asn Asp Thr Gly Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro
165 170 175

Asn Cys Lys Ile Glu Glu Val Lys Asp Ser Lys Leu Thr Leu Val Leu
180 185 190

Thr Lys Cys Gly Ser Gln Ile Leu Ala Thr Met Ala Phe Gln Val Val
195 200 205

Lys Gly Thr Tyr Glu Asn Ile Ser Lys Asn Thr Ala Lys Asn Ser Phe
210 215 220

Ser Ile Lys Leu Leu Phe Asp Asp Asn Gly Lys Leu Leu Glu Gly Ser
225 230 235 240

Ser Leu Asp Lys Asp Tyr Trp Asn Phe Arg Ser Asp Asp Ser Ile Ile
245 250 255

Pro Asn Gln Tyr Asp Asn Ala Val Pro Phe Met Pro Asn Leu Lys Ala
260 265 270

Tyr Pro Lys Pro Ser Thr Val Leu Pro Ser Thr Asp Lys Asn Ser Asn
275 280 285

Gly Lys Asn Thr Ile Val Ser Asn Leu Tyr Leu Glu Gly Lys Ala Tyr
290 295 300

Gln Pro Val Ala Val Thr Ile Thr Phe Asn Lys Glu Ile Gly Cys Thr
305 310 315 320

Tyr Ser Ile Thr Phe Asp Phe Gly Trp Ala Lys Thr Tyr Asp Val Pro
325 330 335

Ile Pro Asp Ser Ser Ser Phe Thr
340

<210> 19
<211> 345
<212> PRT
<213> Human Adenovirus 23 Fiber Protein

<400> 19
Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe
1 5 10 15

Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile
20 25 30

Ala Ile Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly Gly Leu Thr
35 40 45

Val Glu Gln Asp Ser Gly Asn Leu Lys Val Asn Thr Lys Ala Pro Leu
50 55 60

Gln Val Ala Ala Asp Lys Gln Leu Glu Ile Ala Leu Ala Asp Pro Phe
65 70 75 80

Glu Val Ser Lys Gly Arg Leu Gly Ile Lys Ala Gly His Gly Leu Lys
85 90 95

Val Ile Asp Asn Ser Ile Ser Gly Leu Glu Gly Leu Val Gly Thr Leu
100 105 110

Val Val Leu Thr Gly His Gly Ile Gly Thr Glu Asn Leu Leu Asn Asn
115 120 125

Asp Gly Ser Ser Arg Gly Val Gly Ile Asn Val Arg Leu Gly Lys Asp
130 135 140

Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Leu Val Ala Trp Asn Lys
145 150 155 160

Lys Tyr Asp Thr Arg Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn
165 170 175

Cys Lys Val Ile Glu Ala Lys Asp Ser Lys Leu Thr Leu Val Leu Thr
180 185 190

Lys Cys Gly Ser Gln Ile Leu Ala Asn Met Ser Leu Leu Ile Leu Lys
195 200 205

Gly Thr Tyr Glu Tyr Ile Ser Asn Ala Ile Ala Asn Lys Ser Phe Thr
210 215 220

Ile Lys Leu Leu Phe Asn Asp Lys Gly Val Leu Met Asp Gly Ser Ser
225 230 235 240

Leu Asp Lys Asp Tyr Trp Asn Tyr Lys Ser Asp Asp Ser Val Met Ser
245 250 255

Lys Ala Tyr Glu Asn Ala Val Pro Phe Met Pro Asn Leu Lys Ala Tyr
260 265 270

Pro Asn Pro Thr Thr Ser Thr Thr Asn Pro Ser Thr Asp Lys Lys Ser
275 280 285

Asn Gly Lys Asn Ala Ile Val Ser Asn Val Tyr Leu Glu Gly Arg Ala
290 295 300

Tyr Gln Pro Val Ala Ile Thr Ile Thr Phe Asn Lys Glu Thr Gly Cys
305 310 315 320

Thr Tyr Ser Met Thr Phe Asp Phe Gly Trp Ser Lys Val Tyr Asn Pro
325 330 335

Ile Pro Phe Asp Thr Ser Ser Leu Thr
340 345

<210> 20
<211> 389
<212> PRT
<213> Human Adenovirus 24 Fiber Protein

<400> 20
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
35 40 45

Ser Ser Asp Gly Phe Gln Asn Phe Pro Gly Val Leu Ser Leu Lys Leu
50 55 60

Ala Asp Pro Ile Ala Ile Thr Asn Gly Asp Tyr Ser Leu Lys Val Gly
65 70 75 80

Gly Gly Leu Thr Val Glu Lys Asp Ser Gly Asn Leu Lys Val Asn Pro
85 90 95

Lys Ala Pro Leu Gln Val Thr Thr Asp Lys Gln Leu Glu Ile Ala Leu
100 105 110

Ala Tyr Pro Phe Glu Val Ser Asn Gly Lys Leu Gly Ile Lys Ala Gly
115 120 125

His Gly Leu Lys Val Ile Asp Lys Ile Ala Gly Leu Glu Gly Leu Ala
130 135 140

Gly Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Glu Asn Leu
145 150 155 160

Glu Asn Ser Asp Gly Ser Ser Arg Gly Val Gly Ile Asn Val Arg Leu
165 170 175

Ala Lys Asp Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Leu Val Ala
180 185 190

Trp Asn Lys His Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp Pro
195 200 205

Ser Pro Asn Cys Thr Ile Asp Gln Glu Arg Asp Ser Lys Leu Thr Leu
210 215 220

Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Leu
225 230 235 240

Val Val Lys Gly Lys Phe Ser Asn Ile Asn Asn Asn Thr Asn Pro Thr
245 250 255

Asp Lys Lys Ile Thr Val Lys Leu Leu Phe Asn Glu Lys Gly Val Leu
260 265 270

Met Asp Ser Ser Thr Leu Lys Lys Glu Tyr Trp Asn Tyr Arg Asn Asp
275 280 285

Asn Ser Thr Val Ser Gln Ala Tyr Asp Asn Ala Val Pro Phe Met Pro
290 295 300

Asn Ile Lys Ala Tyr Pro Lys Pro Thr Thr Asp Thr Ser Ala Lys Pro
305 310 315 320

Glu Asp Lys Lys Ser Ala Ala Lys Arg Tyr Ile Val Ser Asn Val Tyr
325 330 335

Ile Gly Gly Leu Pro Asp Lys Thr Val Val Ile Thr Ile Lys Phe Asn
340 345 350

Ala Glu Thr Glu Cys Ala Tyr Ser Ile Thr Phe Glu Phe Thr Trp Ala
355 360 365

Lys Thr Phe Glu Asp Val Trp Phe Asp Ser Ser Ser Phe Thr Phe Ser
370 375 380

Tyr Ile Ala Gln Glu
385

<210> 21
<211> 374
<212> PRT
<213> Human Adenovirus 25 Fiber Protein

<400> 21
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Gly
20 25 30

Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Ile Pro Pro Phe Val
35 40 45

Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asp Pro Ile Thr Ile Ser Asn Gly Asp Val Ser Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Val Glu Gln Asp Ser Gly Asn Leu Ser Val Asn
85 90 95

Pro Lys Ala Pro Leu Gln Val Gly Thr Asp Lys Lys Leu Glu Leu Ala
100 105 110

Leu Ala Pro Pro Phe Asn Val Lys Asp Asn Lys Leu Asp Leu Leu Val
115 120 125

Gly Asp Gly Leu Lys Val Ile Asp Lys Ser Ile Ser Xaa Leu Pro Gly
130 135 140

Leu Leu Asn Tyr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Asn Glu
145 150 155 160

Glu Leu Lys Leu Asp Asp Gly Ser Asn Lys Val Gly Leu Cys Val Arg
165 170 175

Ile Gly Glu Gly Gly Gly Leu Thr Phe Asp Asp Lys Gly Tyr Leu Val
180 185 190

Ala Trp Asn Lys Lys His Asp Ile Arg Thr Leu Trp Thr Thr Leu Asp
195 200 205

Pro Ser Pro Asn Cys Arg Ile Asp Val Asp Lys Asp Ser Lys Leu Thr
210 215 220

Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu
225 230 235 240

Leu Val Val Lys Gly Arg Phe Gln Asn Leu Asn Tyr Lys Thr Asn Pro
245 250 255

Asn Leu Pro Lys Thr Phe Thr Ile Lys Leu Leu Phe Asp Glu Asn Gly
260 265 270

Ile Leu Lys Asp Ser Ser Asn Leu Asp Lys Asn Tyr Trp Asn Tyr Arg
275 280 285

Asn Gly Asn Ser Ile Leu Ala Glu Gln Tyr Lys Asn Ala Val Gly Phe
290 295 300

Met Pro Asn Leu Ala Ala Tyr Pro Lys Ser Thr Thr Thr Gln Ser Lys
305 310 315 320

Leu Tyr Ala Arg Asn Thr Ile Phe Gly Asn Thr Tyr Leu Asp Ser Gln
325 330 335

Ala Tyr Asn Pro Val Val Ile Lys Ile Thr Phe Asn Gln Glu Ala Asp
340 345 350

Ser Ala Tyr Ser Ile Thr Leu Asn Tyr Ser Trp Gly Lys Asp Tyr Glu
355 360 365

Asn Ile Pro Phe Asp Ser
370

<210> 22
<211> 334
<212> PRT
<213> Human Adenovirus 27 Fiber Protein

<400> 22
Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe Lys Asn
1 5 10 15

Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile Thr Ile
20 25 30

Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly Gly Leu Val Val Glu
35 40 45

Lys Glu Ser Gly Lys Leu Ser Val Asp Pro Lys Thr Pro Leu Gln Val
50 55 60

Ala Ser Asp Asn Lys Leu Glu Leu Ser Tyr Asn Ala Pro Phe Lys Val
65 70 75 80

Glu Asn Asp Lys Leu Ser Leu Asp Val Gly His Gly Leu Lys Val Ile
85 90 95

Gly Asn Glu Val Ser Ser Leu Pro Gly Leu Ile Asn Lys Leu Val Val
100 105 110

Leu Thr Gly Lys Gly Ile Gly Thr Glu Leu Leu Lys Glu Gln Asn Ser
115 120 125

Asp Lys Ile Ile Gly Val Gly Ile Asn Val Arg Ala Arg Gly Gly Leu
130 135 140

Ser Phe Asp Asn Asp Gly Tyr Leu Val Ala Trp Asn Pro Lys Tyr Asp
145 150 155 160

Thr Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Lys Met
165 170 175

Leu Thr Lys Lys Asp Ser Lys Leu Thr Leu Thr Leu Thr Lys Cys Gly
180 185 190

Ser Gln Ile Leu Gly Asn Val Ser Leu Leu Ala Val Ser Gly Lys Tyr
195 200 205

Leu Asn Met Thr Lys Asp Glu Thr Gly Val Lys Ile Ile Leu Leu Phe
210 215 220

Asp Arg Asn Gly Val Leu Met Gln Glu Ser Ser Leu Asp Lys Glu Tyr
225 230 235 240

Trp Met Tyr Arg Asn Asp Asn Asn Val Ile Gly Thr Pro Tyr Glu Asn
245 250 255

Ala Val Gly Phe Met Pro Asn Leu Val Ala Tyr Pro Lys Pro Thr Ser
260 265 270

Ala Asp Ala Lys Asn Tyr Ser Arg Ser Lys Ile Ile Ser Asn Tyr Leu
275 280 285

Lys Gly Leu Ile Tyr Gln Pro Val Ile Ile Ile Ala Ser Phe Asn Gln
290 295 300

Glu Thr Thr Asn Gly Cys Val Tyr Ser Ile Ser Phe Asp Phe Thr Cys
305 310 315 320

Ser Lys Asp Tyr Thr Gly Gln Gln Phe Asp Val Thr Ser Phe
325 330

<210> 23
<211> 374
<212> PRT
<213> Human Adenovirus 28 Fiber Protein

<400> 23
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
35 40 45

Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asp Pro Ile Thr Ile Ala Asn Gly Asp Val Ser Leu Lys Leu
65 70 75 80

Gly Gly Gly Leu Thr Val Glu Lys Glu Ser Gly Asn Leu Thr Val Asn
85 90 95

Pro Lys Ala Pro Leu Gln Val Ala Ser Gly Gln Leu Glu Leu Ala Tyr
100 105 110

Tyr Ser Pro Phe Asp Val Lys Asn Asn Met Leu Thr Leu Lys Ala Gly
115 120 125

His Gly Leu Ala Val Val Thr Lys Asp Asn Thr Asp Leu Gln Pro Leu
130 135 140

Met Gly Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Gly Thr
145 150 155 160

Ser Ala His Gly Gly Thr Ile Asp Val Arg Ile Gly Lys Asn Gly Ser
165 170 175

Leu Ala Phe Asp Lys Asn Gly Asp Leu Val Ala Trp Asp Lys Glu Asn
180 185 190

Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Lys
195 200 205

Met Ser Glu Val Lys Asp Ser Lys Leu Thr Leu Ile Leu Thr Lys Cys
210 215 220

Gly Ser Gln Ile Leu Gly Ser Val Ser Leu Leu Ala Val Lys Gly Glu
225 230 235 240

Tyr Gln Asn Met Thr Ala Ser Thr Asn Lys Asn Val Lys Ile Thr Leu
245 250 255

Leu Phe Asp Ala Asn Gly Val Leu Leu Glu Gly Ser Ser Leu Asp Lys
260 265 270

Glu Tyr Trp Asn Phe Arg Asn Asn Asp Ser Thr Val Ser Gly Lys Tyr
275 280 285

Glu Asn Ala Val Pro Phe Met Pro Asn Ile Thr Ala Tyr Lys Pro Val
290 295 300

Asn Ser Lys Ser Tyr Ala Arg Ser His Ile Phe Gly Asn Val Tyr Ile
305 310 315 320

Asp Ala Lys Pro Tyr Asn Pro Val Val Ile Lys Ile Ser Phe Asn Gln
325 330 335

Glu Thr Gln Asn Asn Cys Val Tyr Ser Ile Ser Phe Asp Tyr Thr Cys
340 345 350

Ser Lys Glu Tyr Thr Gly Met Gln Phe Asp Val Thr Ser Phe Thr Phe
355 360 365

Ser Tyr Ile Ala Gln Glu
370

<210> 24
<211> 343
<212> PRT
<213> Human Adenovirus 29 Fiber Protein

<400> 24
Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe
1 5 10 15

Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile
20 25 30

Ala Ile Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly Gly Leu Thr
35 40 45

Val Glu Gln Asp Ser Gly Asn Leu Ser Val Asn Pro Lys Ala Pro Leu
50 55 60

Gln Val Gly Thr Asp Lys Lys Leu Glu Leu Ala Leu Ala Pro Pro Phe
65 70 75 80

Asp Val Arg Asp Asn Lys Leu Ala Ile Leu Val Gly Asp Gly Leu Lys
85 90 95

Val Ile Asp Arg Ser Ile Ser Asp Leu Pro Gly Leu Leu Asn Tyr Leu
100 105 110

Val Val Leu Thr Gly Lys Gly Ile Gly Asn Glu Glu Leu Lys Asn Asp
115 120 125

Asp Gly Ser Asn Lys Gly Val Gly Leu Cys Val Arg Ile Gly Glu Gly
130 135 140

Gly Gly Leu Thr Phe Asp Asp Lys Gly Tyr Leu Val Ala Trp Asn Asn
145 150 155 160

Lys His Asp Ile Arg Thr Leu Trp Thr Thr Leu Asp Pro Ser Pro Asn
165 170 175

Cys Lys Ile Asp Ile Glu Lys Asp Ser Lys Leu Thr Leu Val Leu Thr
180 185 190

Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Ile Val Asn
195 200 205

Gly Lys Phe Lys Ile Leu Asn Asn Lys Thr Asp Pro Ser Leu Pro Lys
210 215 220

Ser Phe Asn Ile Lys Leu Leu Phe Asp Gln Asn Gly Val Leu Leu Glu
225 230 235 240

Asn Ser Asn Ile Glu Lys Gln Tyr Leu Asn Phe Arg Ser Gly Asp Ser
245 250 255

Ile Leu Pro Glu Pro Tyr Lys Asn Ala Ile Gly Phe Met Pro Asn Leu
260 265 270

Leu Ala Tyr Ala Lys Ala Thr Thr Asp Gln Ser Lys Ile Tyr Ala Arg
275 280 285

Asn Thr Thr Tyr Gly Asn Ile Tyr Leu Asp Asn Gln Pro Tyr Asn Pro
290 295 300

Val Val Ile Lys Ile Thr Phe Asn Asn Glu Ala Asp Ser Ala Tyr Ser
305 310 315 320

Ile Thr Phe Asn Tyr Ser Trp Thr Lys Asp Tyr Asp Asn Ile Pro Phe
325 330 335

Asp Ser Thr Ser Phe Thr Ser
340

<210> 25
<211> 385
<212> PRT
<213> Human Adenovirus 30 Fiber Protein

<400> 25
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Xaa Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Xaa Thr Pro Pro Phe Val
35 40 45

Xaa Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asp Pro Ile Ala Ile Thr Asn Gly Asp Tyr Ser Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Val Glu Gln Asp Ser Gly Asn Leu Ser Val Asn
85 90 95

Xaa Lys Ala Pro Leu Gln Val Gly Thr Asp Lys Lys Leu Glu Leu Ala
100 105 110

Leu Ala Pro Pro Phe Asp Val Arg Asp Asn Lys Leu Ala Ile Leu Val
115 120 125

Gly Asp Gly Leu Lys Val Ile Asp Arg Ser Ile Ser Asp Leu Pro Gly
130 135 140

Leu Leu Asn Tyr Leu Val Val Xaa Thr Gly Lys Gly Ile Gly Asn Glu
145 150 155 160

Glu Leu Lys Asn Asp Asp Gly Ser Asn Lys Gly Val Gly Leu Cys Val
165 170 175

Arg Ile Gly Glu Gly Gly Gly Leu Thr Xaa Asp Asp Lys Gly Tyr Leu
180 185 190

Val Ala Trp Asn Asn Lys His Asp Ile Arg Thr Leu Trp Thr Thr Leu
195 200 205

Asp Pro Ser Pro Asn Cys Lys Ile Asp Glu Lys Asp Ser Lys Leu Thr
210 215 220

Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu
225 230 235 240

Ile Ile Val Asn Gly Lys Phe Lys Ile Leu Asn Asn Lys Thr Asp Pro
245 250 255

Ser Leu Pro Lys Ser Phe Asn Ile Lys Leu Leu Phe Asp Gln Asn Gly
260 265 270

Val Leu Leu Glu Asn Ser Asn Ile Glu Lys Gln Tyr Leu Asn Phe Arg
275 280 285

Ser Gly Asp Ser Ile Leu Pro Glu Pro Tyr Lys Asn Ala Ile Gly Phe
290 295 300

Met Pro Asn Leu Leu Ala Tyr Ala Lys Ala Thr Thr Asp Gln Ser Lys
305 310 315 320

Thr Tyr Ala Arg Asn Thr Ile Tyr Gly Asn Ile Tyr Leu Asp Asn Gln
325 330 335

Pro Tyr Asn Pro Val Val Ile Lys Ile Thr Phe Asn Asn Glu Ala Asp
340 345 350

Ser Ala Tyr Ser Ile Thr Phe Asn Tyr Ser Trp Thr Lys Asp Tyr Asp
355 360 365

Asn Ile Pro Phe Asp Ser Thr Ser Phe Thr Phe Ser Tyr Ile Ala Gln
370 375 380

Glu
385

<210> 26
<211> 389
<212> PRT
<213> Human Adenovirus 32 Fiber Protein

<400> 26
Ser Cys Ser Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met Lys
1 5 10 15

Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr Gly
20 25 30

Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser
35 40 45

Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu
50 55 60

Ala Asp Pro Ile Thr Ile Ala Asn Gly Asn Val Ser Leu Lys Val Gly
65 70 75 80

Gly Gly Leu Thr Leu Glu Gln Asp Ser Gly Lys Leu Ile Val Asn Pro
85 90 95

Lys Ala Pro Leu Gln Val Ala Asn Asp Lys Leu Glu Leu Ser Tyr Ala
100 105 110

Asp Pro Phe Glu Thr Ser Ala Asn Lys Leu Ser Leu Lys Val Gly His
115 120 125

Gly Leu Lys Val Leu Asp Glu Lys Asn Ala Gly Gly Leu Lys Asp Leu
130 135 140

Ile Gly Thr Leu Val Val Leu Thr Asp Lys Gly Ile Gly Val Glu Glu
145 150 155 160

Leu Lys Asn Ala Asp Asn Thr Asn Arg Gly Val Gly Ile Asn Val Arg
165 170 175

Leu Gly Lys Asp Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Leu Val
180 185 190

Ala Trp Asn Lys His Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp
195 200 205

Pro Ser Pro Asn Cys Thr Thr Asp Glu Glu Arg Asp Ser Lys Leu Thr
210 215 220

Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu
225 230 235 240

Leu Val Val Lys Gly Lys Phe Ser Asn Ile Asn Asn Asn Thr Asn Pro
245 250 255

Thr Asp Lys Lys Ile Thr Val Lys Leu Leu Phe Asn Glu Lys Gly Val
260 265 270

Leu Met Asp Ser Ser Ser Leu Lys Lys Glu Tyr Trp Asn Tyr Arg Asn
275 280 285

Asp Asn Ser Thr Ser Gln Ala Tyr Asp Asn Ala Val Pro Phe Met Pro
290 295 300

Asn Ile Lys Ala Tyr Pro Lys Pro Thr Thr Asp Thr Ser Ala Lys Pro
305 310 315 320

Glu Asp Lys Lys Ser Ala Ala Lys Arg Tyr Ile Val Ser Asn Val Tyr
325 330 335

Ile Gly Gly Leu Pro Asp Lys Thr Val Val Ile Thr Ile Lys Leu Asn
340 345 350

Ala Glu Thr Glu Ser Ala Tyr Ser Met Thr Phe Glu Phe Thr Trp Ala
355 360 365

Lys Thr Phe Glu Asn Leu Gln Phe Asp Ser Ser Ser Phe Thr Phe Ser
370 375 380

Tyr Ile Ala Gln Glu
385

<210> 27
<211> 391
<212> PRT
<213> Human Adenovirus 33 Fiber Protein

<400> 27
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
35 40 45

Ser Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asp Pro Ile Thr Ile Thr Asn Gly Asp Val Ser Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Leu Gln Glu Gly Ser Leu Thr Val Asn Pro Lys
85 90 95

Ala Pro Leu Gln Leu Ala Asn Asp Lys Lys Leu Glu Leu Val Tyr Asp
100 105 110

Asp Pro Phe Glu Val Ser Thr Asn Lys Leu Ser Leu Lys Val Gly His
115 120 125

Gly Leu Lys Val Leu Asp Asp Lys Ser Ala Gly Gly Leu Gln Asp Leu
130 135 140

Ile Gly Lys Leu Val Val Leu Thr Gly Lys Gly Ile Gly Ile Glu Asn
145 150 155 160

Leu Gln Asn Asp Asp Gly Ser Ser Arg Gly Val Gly Ile Asn Val Arg
165 170 175

Leu Gly Thr Asp Gly Gly Leu Ser Phe Asp Arg Lys Gly Glu Leu Val
180 185 190

Ala Trp Asn Arg Lys Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp
195 200 205

Pro Ser Pro Asn Cys Lys Ala Glu Thr Glu Lys Asp Ser Lys Leu Thr
210 215 220

Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Thr Val Ser Ile
225 230 235 240

Ile Val Leu Lys Gly Lys Tyr Glu Phe Val Lys Lys Glu Thr Glu Pro
245 250 255

Lys Ser Phe Asp Val Lys Leu Leu Phe Asp Ser Lys Gly Val Leu Leu
260 265 270

Pro Thr Ser Asn Leu Ser Lys Glu Tyr Trp Asn Tyr Arg Ser Tyr Asp
275 280 285

Asn Asn Ile Gly Thr Pro Tyr Glu Asn Ala Val Pro Phe Met Pro Asn
290 295 300

Leu Lys Ala Tyr Pro Lys Pro Thr Lys Thr Ala Ser Asp Lys Ala Glu
305 310 315 320

Asn Lys Ile Ser Ser Ala Lys Asn Lys Ile Val Ser Asn Phe Tyr Phe
325 330 335

Gly Gly Gln Ala Tyr Gln Pro Gly Thr Ile Ile Ile Lys Phe Asn Glu
340 345 350

Glu Ile Asp Glu Thr Cys Ala Tyr Ser Ile Thr Phe Asn Phe Gly Trp
355 360 365

Gly Lys Val Tyr Asp Asn Pro Phe Pro Phe Asp Thr Thr Ser Phe Thr
370 375 380

Phe Ser Tyr Ile Ala Gln Glu
385 390

<210> 28
<211> 338
<212> PRT
<213> Human Adenovirus 34 Fiber Protein

<400> 28
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Glu Asp Glu Ser Thr Ser Gln His Pro Phe Ile Asn Pro Gly Phe Ile
35 40 45

Ser Pro Asn Gly Phe Thr Gln Ser Pro Asp Gly Val Leu Thr Leu Lys
50 55 60

Cys Leu Thr Pro Leu Thr Thr Thr Gly Gly Ser Leu Gln Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Val Asp Asp Thr Asp Gly Thr Leu Gln Lys Asn
85 90 95

Ile Arg Ala Thr Thr Pro Ile Thr Lys Asn Asn His Ser Val Glu Leu
100 105 110

Thr Ile Gly Asn Gly Leu Glu Thr Gln His Asn Lys Leu Cys Ala Lys
115 120 125

Leu Gly Asn Gly Asn Leu Lys Phe Asn Asn Gly Asp Ile Cys Ile Lys
130 135 140

Asp Ser Ile Asn Thr Leu Trp Thr Gly Ile Asn Pro Pro Asn Cys Gln
145 150 155 160

Ile Val Glu Asn Thr Asn Thr Asn Asp Gly Lys Leu Thr Leu Val Leu
165 170 175

Val Lys Asn Gly Gly Leu Val Asn Gly Tyr Val Ser Leu Val Gly Val
180 185 190

Ser Asp Thr Val Asn Gln Met Phe Thr Gln Lys Thr Ala Asn Ile Gln
195 200 205

Leu Arg Leu Tyr Phe Asp Ser Ser Gly Asn Leu Leu Thr Asp Glu Ser
210 215 220

Asp Leu Lys Ile Pro Leu Lys Asn Lys Ser Ser Thr Ala Thr Ser Glu
225 230 235 240

Thr Val Ala Ser Ser Lys Ala Phe Met Pro Ser Thr Thr Ala Tyr Pro
245 250 255

Phe Asn Thr Thr Thr Arg Asp Ser Glu Asn Tyr Ile His Gly Ile Cys
260 265 270

Tyr Tyr Met Thr Ser Tyr Asp Arg Ser Leu Phe Pro Leu Asn Ile Ser
275 280 285

Ile Met Leu Asn Ser Arg Met Ile Ser Ser Asn Val Ala Tyr Ala Ile
290 295 300

Gln Phe Glu Trp Asn Leu Asn Ala Ser Glu Ser Pro Glu Lys Gln His
305 310 315 320

Met Thr Leu Thr Thr Ser Pro Phe Phe Phe Ser Tyr Ile Ile Glu Asp
325 330 335

Asp Asn

<210> 29
<211> 338
<212> PRT
<213> Human Adenovirus 35 Fiber Protein

<400> 29
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Glu Asp Glu Ser Thr Ser Gln His Pro Phe Ile Asn Pro Gly Phe Ile
35 40 45

Ser Pro Asn Gly Phe Thr Gln Ser Pro Asp Gly Val Leu Thr Leu Lys
50 55 60

Cys Leu Thr Pro Leu Thr Thr Thr Gly Gly Ser Leu Gln Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Val Asp Asp Thr Asp Gly Thr Leu Gln Glu Asn
85 90 95

Ile Arg Ala Thr Ala Pro Ile Thr Lys Asn Asn His Ser Val Glu Leu
100 105 110

Ser Ile Gly Asn Gly Leu Glu Thr Gln Asn Asn Lys Leu Cys Ala Lys
115 120 125

Leu Gly Asn Gly Leu Lys Phe Asn Asn Gly Asp Ile Cys Ile Lys Asp
130 135 140

Ser Ile Asn Thr Leu Trp Thr Gly Ile Asn Pro Pro Pro Asn Cys Gln
145 150 155 160

Ile Val Glu Asn Thr Asn Thr Asn Asp Gly Lys Leu Thr Leu Val Leu
165 170 175

Val Lys Asn Gly Gly Leu Val Asn Gly Tyr Val Ser Leu Val Gly Val
180 185 190

Ser Asp Thr Val Asn Gln Met Phe Thr Gln Lys Thr Ala Asn Ile Gln
195 200 205

Leu Arg Leu Tyr Phe Asp Ser Ser Gly Asn Leu Leu Thr Glu Glu Ser
210 215 220

Asp Leu Lys Ile Pro Leu Lys Asn Lys Ser Ser Thr Ala Thr Ser Glu
225 230 235 240

Thr Val Ala Ser Ser Lys Ala Phe Met Pro Ser Thr Thr Ala Tyr Pro
245 250 255

Phe Asn Thr Thr Thr Arg Asp Ser Glu Asn Tyr Ile His Gly Ile Cys
260 265 270

Tyr Tyr Met Thr Ser Tyr Asp Arg Ser Leu Phe Pro Leu Asn Ile Ser
275 280 285

Ile Met Leu Asn Ser Arg Met Ile Ser Ser Asn Val Ala Tyr Ala Ile
290 295 300

Gln Phe Glu Trp Asn Leu Asn Ala Ser Glu Ser Pro Glu Ser Asn Ile
305 310 315 320

Met Thr Leu Thr Thr Ser Pro Phe Phe Phe Ser Tyr Ile Thr Glu Asp
325 330 335

Asp Asn

<210> 30
<211> 391
<212> PRT
<213> Human Adenovirus 36 Fiber Protein

<400> 30
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
35 40 45

Ser Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asp Pro Ile Ala Ile Val Asn Gly Asp Val Ser Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Val Glu Gln Asp Ser Gly Lys Leu Lys Val Asn
85 90 95

Pro Lys Ile Pro Leu Gln Val Val Asn Lys Gln Leu Glu Leu Ala Thr
100 105 110

Asp Lys Pro Phe Lys Ile Glu Asn Asn Lys Leu Ala Leu Asp Val Gly
115 120 125

His Gly Leu Lys Val Ile Asp Lys Thr Ile Ser Asp Leu Gln Gly Leu
130 135 140

Val Gly Lys Leu Val Val Leu Thr Gly Val Gly Ile Gly Thr Glu Thr
145 150 155 160

Leu Lys Asp Lys Asn Asp Lys Val Ile Gly Ser Ala Val Asn Val Arg
165 170 175

Leu Gly Lys Asp Gly Gly Leu Asp Phe Asn Lys Lys Gly Asp Leu Val
180 185 190

Ala Trp Asn Arg Tyr Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp
195 200 205

Pro Ser Pro Asn Cys Lys Val Tyr Glu Ala Lys Ser Lys Leu Thr Leu
210 215 220

Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Ser Val Ala Leu Leu
225 230 235 240

Ile Val Lys Gly Lys Tyr Gln Thr Ile Ser Glu Ser Thr Ile Pro Lys
245 250 255

Asp Gln Arg Asn Phe Ser Val Lys Leu Met Phe Asp Glu Lys Gly Lys
260 265 270

Leu Leu Asp Lys Ser Ser Leu Asp Lys Glu Tyr Trp Asn Phe Arg Ser
275 280 285

Asn Asp Ser Val Val Gly Thr Ala Tyr Asp Asn Ala Val Pro Phe Met
290 295 300

Pro Asn Leu Lys Ala Tyr Pro Lys Asn Thr Thr Thr Ser Ser Thr Asn
305 310 315 320

Pro Asp Asp Lys Ile Ser Ala Gly Lys Lys Asn Ile Val Ser Asn Val
325 330 335

Tyr Leu Glu Gly Arg Val Tyr Gln Pro Val Ala Leu Thr Val Lys Phe
340 345 350

Asn Ser Glu Asn Asp Cys Ala Tyr Ser Ile Thr Phe Asp Phe Val Trp
355 360 365

Ser Lys Thr Tyr Glu Ser Pro Val Ala Phe Asp Ser Ser Ser Phe Thr
370 375 380

Phe Ser Tyr Ile Ala Gln Glu
385 390

<210> 31
<211> 381
<212> PRT
<213> Human Adenovirus 37 Fiber Protein

<400> 31
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
35 40 45

Ser Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asp Pro Ile Thr Ile Thr Asn Gly Asp Val Ser Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Leu Gln Asp Gly Ser Leu Thr Val Asn Pro Lys
85 90 95

Ala Pro Leu Gln Val Asn Thr Asp Lys Lys Leu Glu Leu Ala Tyr Asp
100 105 110

Asn Pro Phe Glu Ser Ser Ala Asn Lys Leu Ser Leu Val Gly His Gly
115 120 125

Leu Lys Val Leu Asp Glu Lys Ser Ala Ala Gly Leu Lys Asp Leu Ile
130 135 140

Gly Lys Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Glu Asn Leu
145 150 155 160

Glu Asn Thr Asp Gly Ser Ser Arg Gly Ile Gly Ile Asn Val Arg Ala
165 170 175

Arg Glu Gly Leu Thr Phe Asp Asn Asp Gly Tyr Leu Val Ala Trp Asn
180 185 190

Pro Lys Tyr Asp Leu Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro
195 200 205

Asn Cys Thr Ile Ala Gln Asp Lys Asp Ser Lys Leu Thr Leu Val Leu
210 215 220

Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Val Val
225 230 235 240

Ala Gly Lys Tyr His Ile Ile Asn Asn Lys Thr Asn Pro Lys Ile Lys
245 250 255

Ser Phe Thr Ile Lys Leu Leu Phe Asn Lys Phe Asn Gly Val Leu Leu
260 265 270

Asp Asn Ser Asn Leu Gly Lys Ala Tyr Trp Asn Phe Arg Ser Gly Asn
275 280 285

Ser Asn Val Ser Thr Ala Tyr Glu Lys Ala Ile Gly Phe Met Pro Asn
290 295 300

Leu Val Ala Val Ser Lys Pro Ser Asn Ser Lys Lys Tyr Ala Arg Asp
305 310 315 320

Ile Val Tyr Gly Asn Ile Thr Tyr Leu Gly Gly Lys Pro Asp Gln Pro
325 330 335

Gly Val Ile Lys Thr Thr Phe Asn Gln Glu Thr Gly Cys Glu Tyr Ser
340 345 350

Ile Thr Phe Asn Phe Ser Trp Ser Lys Thr Tyr Glu Asn Val Glu Phe
355 360 365

Glu Thr Thr Ser Phe Thr Phe Ser Tyr Ile Ala Gln Glu
370 375 380

<210> 32
<211> 391
<212> PRT
<213> Human Adenovirus 38 Fiber Protein

<400> 32
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Xaa Thr Pro Pro Phe Val
35 40 45

Xaa Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asp Pro Ile Thr Ile Ala Asn Gly Asn Val Ser Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Leu Glu Gln Asp Ser Gly Lys Leu Ile Val Asn
85 90 95

Xaa Lys Ala Pro Leu Gln Val Ala Asn Asp Lys Leu Glu Leu Ser Tyr
100 105 110

Ala Asp Pro Phe Glu Thr Ser Ala Asn Lys Leu Ser Leu Lys Val Gly
115 120 125

His Gly Leu Lys Val Leu Asp Glu Lys Asn Ala Gly Gly Leu Lys Asp
130 135 140

Leu Ile Gly Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Val Glu
145 150 155 160

Glu Leu Lys Asn Ala Asp Asn Thr Asn Arg Gly Val Gly Ile Asn Val
165 170 175

Arg Leu Gly Lys Asp Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Xaa
180 185 190

Val Ala Trp Asn Lys His Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro
195 200 205

Asp Pro Ser Pro Asn Cys Thr Ile Asp Glu Glu Arg Asp Ser Lys Leu
210 215 220

Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser
225 230 235 240

Leu Leu Val Val Lys Gly Lys Phe Ser Asn Ile Asn Asn Asn Thr Asn
245 250 255

Pro Thr Asp Lys Lys Ile Thr Val Lys Leu Leu Phe Asn Glu Lys Gly
260 265 270

Val Leu Met Asp Ser Ser Ser Leu Lys Lys Glu Tyr Trp Asn Tyr Arg
275 280 285

Asn Asp Asn Ser Thr Val Ser Gln Ala Tyr Asp Asn Ala Val Pro Phe
290 295 300

Met Pro Asn Ile Lys Ala Tyr Pro Lys Pro Thr Thr Asp Thr Ser Ala
305 310 315 320

Lys Pro Glu Asp Lys Lys Ser Ala Ala Lys Arg Tyr Thr Val Ser Asn
325 330 335

Val Tyr Ile Gly Gly Leu Pro Asp Lys Thr Val Val Ile Thr Ile Lys
340 345 350

Leu Asn Ala Glu Thr Glu Ser Ala Tyr Ser Met Thr Phe Glu Phe Thr
355 360 365

Trp Ala Lys Thr Phe Glu Asn Leu Gln Phe Asp Ser Ser Ser Phe Thr
370 375 380

Phe Ser Tyr Ile Ala Gln Glu
385 390

<210> 33
<211> 338
<212> PRT
<213> Human Adenovirus 39 Fiber Protein

<400> 33
Ile Arg Ile Ser Pro Ser Ser Leu Pro Pro Leu Ser Pro Pro Met Asp
1 5 10 15

Ser Lys Thr Ser Pro Leu Gly Cys Tyr His Ser Asn Trp Leu Thr Gln
20 25 30

Ser Pro Ser Pro Met Gly Met Ser His Arg Trp Glu Gly Gly Ser Pro
35 40 45

Trp Gln Glu Gly Thr Gly Asp Leu Lys Val Asn Ala Lys Ser Pro Leu
50 55 60

Gln Val Ala Thr Asn Lys Gln Leu Glu Ile Ala Leu Ala Lys Pro Phe
65 70 75 80

Glu Glu Lys Asp Gly Lys Leu Ala Leu Lys Ile Gly His Gly Leu Ala
85 90 95

Val Val Asp Glu Asn His Thr His Leu Gln Ser Leu Ile Gly Thr Leu
100 105 110

Val Ile Leu Thr Gly Lys Gly Ile Gly Thr Gly Arg Ala Glu Ser Gly
115 120 125

Gly Thr Ile Asp Val Arg Leu Gly Ser Gly Gly Gly Leu Ser Phe Asp
130 135 140

Lys Asp Gly Asn Leu Val Ala Trp Asn Lys Asp Asp Asp Arg Arg Thr
145 150 155 160

Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn Cys Lys Ile Asp Gln Asp
165 170 175

Lys Asp Ser Lys Leu Thr Phe Val Leu Thr Lys Cys Gly Ser Gln Ile
180 185 190

Leu Ala Asn Met Ser Leu Leu Val Val Lys Gly Lys Phe Ser Met Ile
195 200 205

Asn Asn Lys Val Asn Gly Thr Asp Asp Tyr Lys Lys Phe Thr Ile Lys
210 215 220

Leu Leu Phe Asp Glu Lys Gly Val Leu Leu Lys Asp Ser Ser Leu Asp
225 230 235 240

Lys Glu Tyr Trp Asn Tyr Arg Ser Asn Asn Asn Asn Val Gly Ser Ala
245 250 255

Tyr Glu Glu Ala Val Gly Phe Met Pro Ser Thr Thr Ala Tyr Pro Lys
260 265 270

Pro Pro Thr Pro Pro Thr Asn Pro Thr Thr Pro Leu Glu Lys Ser Gln
275 280 285

Ala Lys Asn Lys Tyr Val Ser Asn Val Tyr Leu Gly Gly Gln Ala Gly
290 295 300

Asn Pro Val Ala Thr Thr Val Ser Phe Asn Lys Glu Thr Gly Cys Thr
305 310 315 320

Tyr Ser Ile Thr Phe Asp Phe Ala Trp Asn Lys Thr Tyr Glu Asn Val
325 330 335

Gln Cys

<210> 34
<211> 378
<212> PRT
<213> Human Adenovirus 42 Fiber Protein

<400> 34
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
35 40 45

Ser Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asn Pro Ile Ala Ile Thr Asn Gly Asp Val Ser Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Leu Gln Asp Gly Thr Gly Lys Leu Thr Ile Asp
85 90 95

Thr Lys Thr Pro Leu Gln Val Ala Asn Asn Lys Leu Glu Leu Ala Phe
100 105 110

Asp Ala Pro Leu Tyr Glu Lys Asn Gly Lys Leu Ala Leu Lys Thr Gly
115 120 125

His Gly Leu Ala Val Leu Thr Lys Asp Ile Gly Ile Pro Glu Leu Ile
130 135 140

Gly Ser Leu Val Ile Leu Thr Gly Lys Gly Ile Gly Thr Gly Thr Val
145 150 155 160

Ala Gly Gly Gly Thr Ile Asp Val Arg Leu Gly Asp Asp Gly Gly Leu
165 170 175

Ser Phe Asp Lys Lys Gly Asp Leu Val Ala Trp Asn Lys Lys Asn Asp
180 185 190

Arg Arg Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn Cys Arg Val
195 200 205

Ser Glu Asp Lys Asp Ser Lys Leu Thr Leu Ile Leu Thr Lys Cys Gly
210 215 220

Ser Gln Ile Leu Ala Ser Phe Ser Leu Leu Val Val Xaa Gly Thr Tyr
225 230 235 240

Thr Thr Val Asp Lys Asn Thr Thr Asn Lys Gln Phe Ser Ile Lys Leu
245 250 255

Leu Phe Asp Ala Asn Gly Lys Leu Lys Ser Glu Ser Asn Leu Ser Gln
260 265 270

Tyr Trp Asn Tyr Arg Ser Asp Asn Ser Val Val Ser Thr Pro Tyr Asp
275 280 285

Asn Ala Val Pro Phe Met Pro Asn Thr Ala Tyr Pro Lys Ile Ile Asn
290 295 300

Ser Thr Thr Asp Pro Glu Asn Lys Lys Ser Ala Lys Lys Thr Ile Val
305 310 315 320

Gly Asn Val Tyr Leu Glu Gly Asn Ala Gly Gln Pro Val Ala Val Ala
325 330 335

Ile Ser Phe Asn Lys Glu Thr Thr Ala Asp Tyr Ser Ile Thr Phe Asp
340 345 350

Phe Ala Trp Ser Lys Ala Tyr Glu Thr Pro Val Pro Phe Asp Thr Ser
355 360 365

Ser Met Thr Phe Ser Tyr Ile Ala Gln Glu
370 375

<210> 35
<211> 328
<212> PRT
<213> Human Adenovirus 43 Fiber Protein

<400> 35
Asn Ile Pro Xaa Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe Lys
1 5 10 15

Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile Thr
20 25 30

Ile Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly Gly Leu Thr Val
35 40 45

Glu Lys Glu Ser Gly Asn Leu Thr Val Asn Pro Lys Ala Pro Leu Gln
50 55 60

Val Ala Lys Gly Gln Leu Glu Leu Ala Tyr Asp Ser Pro Phe Asp Val
65 70 75 80

Lys Asn Asn Met Leu Thr Leu Lys Ala Gly His Gly Leu Ala Val Val
85 90 95

Thr Lys Asp Asn Thr Asp Leu Gln Pro Leu Met Gly Thr Leu Val Val
100 105 110

Leu Thr Gly Lys Gly Ile Gly Thr Gly Thr Ser Ala His Gly Gly Thr
115 120 125

Ile Asp Val Arg Ile Gly Lys Asn Gly Ser Leu Ala Phe Asp Lys Asp
130 135 140

Gly Asp Leu Val Ala Trp Asp Lys Glu Asn Asp Arg Arg Thr Leu Trp
145 150 155 160

Thr Thr Pro Asp Thr Ser Pro Asn Cys Lys Met Ser Glu Ala Lys Asp
165 170 175

Ser Lys Leu Thr Leu Ile Leu Thr Lys Cys Gly Ser Gln Ile Leu Gly
180 185 190

Ser Val Ser Leu Leu Ala Val Lys Gly Glu Tyr Gln Asn Met Thr Ala
195 200 205

Asn Thr Lys Lys Asn Val Lys Ile Thr Leu Leu Phe Asp Ala Asn Gly
210 215 220

Val Leu Leu Ala Gly Ser Ser Xaa Xaa Lys Glu Tyr Trp Asn Phe Arg
225 230 235 240

Ser Asn Asp Ser Thr Val Ser Gly Asn Tyr Glu Asn Ala Val Gln Phe
245 250 255

Met Pro Asn Ile Thr Ala Tyr Lys Pro Thr Asn Ser Lys Ser Tyr Ala
260 265 270

Arg Ser Val Ile Phe Gly Asn Val Tyr Ile Asp Ala Lys Pro Tyr Asn
275 280 285

Pro Val Val Ile Lys Ile Ser Phe Asn Gln Glu Thr Gln Asn Asn Cys
290 295 300

Val Tyr Ser Ile Ser Phe Asp Tyr Thr Leu Ser Lys Asp Tyr Pro Asn
305 310 315 320

Met Gln Phe Asp Val Thr Leu Ser
325

<210> 36
<211> 341
<212> PRT
<213> Human Adenovirus 44 Fiber Protein

<400> 36
Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe Gln
1 5 10 15

Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile Thr
20 25 30

Ile Thr Asn Gly Asn Val Ser Leu Lys Val Gly Gly Gly Leu Thr Leu
35 40 45

Gln Glu Gly Thr Gly Asp Leu Lys Val Asn Ala Lys Ser Pro Leu Gln
50 55 60

Val Ala Thr Asn Lys Gln Leu Glu Ile Ala Leu Ala Lys Pro Phe Glu
65 70 75 80

Glu Lys Asp Gly Lys Leu Ala Leu Lys Ile Gly His Gly Leu Ala Val
85 90 95

Val Asp Glu Asn His Thr His Leu Gln Ser Leu Ile Gly Thr Leu Val
100 105 110

Ile Leu Thr Gly Lys Gly Ile Gly Thr Gly Ser Ala Glu Ser Gly Gly
115 120 125

Thr Ile Asp Val Arg Leu Gly Ser Gly Gly Gly Leu Ser Phe Asp Lys
130 135 140

Asp Gly Asn Leu Val Ala Trp Asn Lys Asp Asp Asp Arg Arg Thr Leu
145 150 155 160

Trp Thr Thr Pro Asp Pro Ser Pro Asn Cys Lys Ile Asp Gln Asp Lys
165 170 175

Asp Ser Lys Leu Thr Phe Val Leu Thr Lys Cys Gly Ser Gln Ile Leu
180 185 190

Ala Asn Met Ser Leu Leu Val Val Lys Gly Lys Phe Ser Met Ile Asn
195 200 205

Asn Lys Val Asn Gly Thr Asp Asp Tyr Lys Lys Phe Thr Ile Lys Leu
210 215 220

Leu Phe Asp Glu Lys Gly Val Leu Leu Lys Asp Ser Ser Leu Asp Lys
225 230 235 240

Glu Tyr Trp Asn Tyr Arg Ser Asn Asn Asn Asn Val Gly Ser Ala Tyr
245 250 255

Glu Glu Ala Val Gly Phe Met Pro Ser Thr Thr Ala Tyr Pro Lys Pro
260 265 270

Pro Thr Pro Pro Thr Asn Pro Thr Thr Pro Leu Glu Lys Ser Gln Ala
275 280 285

Lys Asn Lys Tyr Val Ser Asn Val Tyr Leu Gly Gly Gln Ala Gly Asn
290 295 300

Pro Val Ala Thr Thr Val Ser Phe Asn Lys Glu Thr Gly Cys Thr Tyr
305 310 315 320

Ser Ile Thr Phe Asp Phe Ala Trp Asn Lys Thr Tyr Glu Asn Val Gln
325 330 335

Phe Asp Ser Ser Phe
340

<210> 37
<211> 345
<212> PRT
<213> Human Adenovirus 45 Fiber Protein

<400> 37
Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe Gln
1 5 10 15

Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile Ala
20 25 30

Ile Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly Gly Leu Thr Val
35 40 45

Glu Lys Asp Ser Gly Asn Leu Lys Val Asn Pro Lys Ala Pro Leu Gln
50 55 60

Val Thr Thr Asp Lys Gln Leu Glu Ile Ala Leu Ala Tyr Pro Phe Glu
65 70 75 80

Val Ser Asn Gly Lys Leu Gly Ile Lys Ala Gly His Gly Leu Lys Val
85 90 95

Ile Asp Lys Ile Ala Gly Leu Glu Gly Leu Ala Gly Thr Leu Val Val
100 105 110

Leu Thr Gly Lys Gly Ile Gly Thr Glu Asn Leu Glu Asn Ser Asp Gly
115 120 125

Ser Ser Arg Gly Val Gly Ile Asn Val Arg Leu Ala Lys Asp Gly Val
130 135 140

Leu Ala Phe Asp Lys Lys Gly Asp Leu Val Ala Trp Asn Lys His Asp
145 150 155 160

Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn Cys Thr
165 170 175

Ile Asp Gln Glu Arg Asp Ser Lys Leu Thr Leu Val Leu Thr Lys Cys
180 185 190

Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Leu Val Val Lys Gly Lys
195 200 205

Phe Ser Asn Ile Asn Asn Asn Ala Asn Pro Thr Asp Lys Lys Ile Thr
210 215 220

Val Lys Leu Leu Phe Asn Glu Lys Gly Val Leu Met Asp Ser Ser Thr
225 230 235 240

Leu Lys Lys Glu Tyr Trp Asn Tyr Arg Asn Asp Asn Ser Thr Val Ser
245 250 255

Gln Ala Tyr Asp Asn Ala Val Pro Phe Met Pro Asn Ile Lys Ala Tyr
260 265 270

Pro Lys Pro Ser Thr Asp Thr Ser Ala Lys Pro Glu Asp Lys Lys Ser
275 280 285

Ala Ala Lys Arg Tyr Ile Val Ser Asn Val Tyr Ile Gly Gly Leu Pro
290 295 300

Asp Lys Thr Val Val Ile Thr Ile Lys Phe Asn Ala Glu Thr Glu Cys
305 310 315 320

Ala Tyr Ser Ile Thr Phe Glu Phe Thr Trp Ala Lys Thr Phe Glu Asp
325 330 335

Val Gln Cys Asp Ser Ser Ser Phe Thr
340 345

<210> 38
<211> 339
<212> PRT
<213> Human Adenovirus 46 Fiber Protein

<400> 38
Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe Lys
1 5 10 15

Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile Ala
20 25 30

Ile Val Asn Gly Asp Val Ser Leu Lys Val Gly Gly Gly Leu Thr Leu
35 40 45

Gln Glu Gly Asn Leu Thr Val Asp Ala Lys Ala Pro Leu Gln Val Ala
50 55 60

Asn Asp Lys Leu Glu Leu Ser Tyr Ala Asp Phe Phe Glu Val Lys Asp
65 70 75 80

Thr Lys Leu Gln Leu Lys Val Gly His Gly Leu Lys Val Ile Asp Glu
85 90 95

Lys Thr Ser Ser Gly Leu Gln Ser Leu Ile Gly Asn Leu Val Val Leu
100 105 110

Thr Gly Lys Gly Ile Gly Thr Gln Glu Leu Lys Asp Lys Asp Asp Glu
115 120 125

Thr Lys Asn Ile Gly Val Gly Ile Asn Val Arg Ile Gly Lys Asn Glu
130 135 140

Ser Leu Ala Phe Asp Lys Asp Gly Asn Leu Val Ala Trp Asp Asn Glu
145 150 155 160

Asn Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Ser Lys Phe
165 170 175

Val Lys Ile Ser Thr Glu Lys Asp Ser Lys Leu Thr Leu Val Leu Thr
180 185 190

Lys Cys Gly Ser Gln Ile Leu Ala Ser Val Ser Leu Leu Ala Val Ala
195 200 205

Gly Ser Tyr Leu Asn Met Thr Ala Ser Thr Gln Lys Ser Ile Lys Val
210 215 220

Ser Leu Met Phe Asp Ser Lys Gly Leu Leu Met Thr Thr Ser Ser Ile
225 230 235 240

Asp Lys Gly Tyr Trp Asn Tyr Arg Asn Lys Asn Ser Val Val Gly Thr
245 250 255

Ala Tyr Glu Asn Ala Ile Pro Phe Met Pro Asn Leu Val Ala Tyr Pro
260 265 270

Arg Pro Asn Thr Pro Asp Ser Lys Ile Tyr Ala Arg Ser Lys Ile Val
275 280 285

Gly Asn Val Tyr Leu Ala Gly Leu Ala Tyr Gln Pro Ile Val Ile Thr
290 295 300

Val Ser Phe Asn Gln Glu Lys Asp Ala Ser Cys Ala Tyr Ser Ile Thr
305 310 315 320

Phe Glu Phe Ala Trp Asn Lys Asp Tyr Val Gly Gln Phe Asp Thr Thr
325 330 335

Ser Phe Thr

<210> 39
<211> 389
<212> PRT
<213> Human Adenovirus 47 Fiber Protein

<400> 39
Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met Lys Arg
1 5 10 15

Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr Gly Tyr
20 25 30

Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser
35 40 45

Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala
50 55 60

Asp Pro Ile Thr Ile Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly
65 70 75 80

Gly Leu Thr Leu Gln Glu Gly Thr Gly Asn Leu Thr Val Asn Ala Lys
85 90 95

Ala Pro Leu Gln Val Ala Asp Asp Lys Lys Leu Glu Leu Ser Tyr Asp
100 105 110

Asn Pro Phe Glu Val Ser Ala Asn Lys Leu Ser Leu Lys Val Gly His
115 120 125

Gly Leu Lys Val Leu Asp Glu Lys Asn Ser Gly Gly Leu Gln Glu Leu
130 135 140

Ile Gly Lys Leu Val Ile Leu Thr Gly Lys Gly Ile Gly Val Glu Glu
145 150 155 160

Leu Lys Asn Ala Asp Asn Thr Asn Arg Gly Val Gly Ile Asn Val Arg
165 170 175

Leu Gly Lys Asp Gly Gly Leu Ser Phe Asp Lys Lys Gly Glu Leu Val
180 185 190

Ala Trp Asn Lys His Asn Asp Thr Arg Thr Leu Trp Thr Thr Pro Asp
195 200 205

Pro Ser Pro Asn Cys Lys Ile Glu Gln Asp Lys Asp Ser Lys Leu Thr
210 215 220

Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Thr Met Ala Phe
225 230 235 240

Gln Val Val Lys Asp Thr Tyr Glu Asn Ile Ser Lys Asn Thr Ala Lys
245 250 255

Lys Ser Phe Ser Ile Lys Leu Leu Phe Asp Asp Asn Gly Lys Leu Leu
260 265 270

Glu Gly Ser Ser Leu Asp Lys Asp Tyr Trp Asn Phe Arg Asn Asp Asp
275 280 285

Ser Ile Met Pro Ser Gln Tyr Asp Asn Ala Val Pro Phe Met Pro Asn
290 295 300

Leu Lys Ala Tyr Pro Asn Pro Lys Thr Ser Thr Val Leu Pro Ser Thr
305 310 315 320

Asp Lys Lys Ser Asn Gly Lys Asn Thr Ile Val Ser Asn Leu Tyr Leu
325 330 335

Glu Gly Lys Ala Tyr Gln Pro Val Ala Val Thr Ile Thr Phe Asn Lys
340 345 350

Glu Tyr Gly Cys Thr Tyr Ser Ile Thr Phe Glu Phe Gly Trp Ala Lys
355 360 365

Thr Tyr Asp Val Pro Ile Pro Phe Asp Ser Ser Ser Phe Thr Phe Ser
370 375 380

Tyr Ile Ala Gln Glu
385

<210> 40
<211> 343
<212> PRT
<213> Human Adenovirus 48 Fiber Protein

<400> 40
Ser Asp Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe
1 5 10 15

Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile
20 25 30

Thr Ile Thr Asn Gly Asn Val Ser Leu Lys Val Gly Gly Gly Leu Thr
35 40 45

Leu Gln Glu Gly Thr Gly Asp Leu Lys Val Asn Ala Lys Ser Pro Leu
50 55 60

Gln Val Ala Thr Asn Lys Gln Leu Glu Ile Ala Leu Ala Lys Pro Phe
65 70 75 80

Glu Glu Lys Asp Gly Lys Leu Ala Leu Lys Ile Gly His Glu Leu Ala
85 90 95

Val Val Asp Glu Asn Leu Thr His Leu Gln Ser Leu Ile Gly Thr Leu
100 105 110

Val Ile Leu Thr Gly Lys Gly Ile Gly Thr Gly Arg Ala Glu Ser Gly
115 120 125

Gly Thr Ile Asp Val Arg Leu Gly Ser Gly Gly Gly Leu Ser Phe Asp
130 135 140

Lys Asp Gly Asn Leu Val Ala Trp Asn Lys Asp Asp Asp Arg Arg Thr
145 150 155 160

Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn Cys Lys Ile Asp Gln Asp
165 170 175

Lys Asp Ser Lys Leu Thr Phe Val Leu Thr Lys Cys Gly Ser Gln Ile
180 185 190

Leu Ala Asn Met Ser Leu Leu Val Val Lys Gly Lys Phe Ser Met Ile
195 200 205

Asn Asn Lys Val Asn Gly Thr Asp Asp Tyr Lys Lys Phe Thr Ile Lys
210 215 220

Leu Leu Phe Asp Glu Lys Gly Val Leu Leu Lys Asp Ser Ser Leu Asp
225 230 235 240

Lys Glu Tyr Trp Asn Tyr Arg Ser Asn Asn Asn Asn Val Gly Ser Ala
245 250 255

Tyr Glu Glu Ala Val Gly Phe Met Pro Ser Thr Thr Ala Tyr Pro Lys
260 265 270

Pro Pro Thr Pro Pro Thr Asn Pro Thr Thr Pro Leu Glu Lys Ser Gln
275 280 285

Ala Lys Asn Lys Tyr Val Ser Asn Val Tyr Leu Gly Gly Gln Ala Gly
290 295 300

Asn Pro Val Ala Thr Thr Val Ser Phe Asn Lys Glu Thr Gly Cys Thr
305 310 315 320

Tyr Ser Ile Thr Phe Asp Phe Ala Trp Asn Lys Thr Tyr Lys Met Ala
325 330 335

Phe Ile Pro Arg Phe Asn Phe
340

<210> 41
<211> 393
<212> PRT
<213> Human Adenovirus 49 Fiber Protein

<400> 41
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
35 40 45

Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
50 55 60

Leu Ala Asp Pro Ile Ala Ile Thr Asn Gly Asn Val Ser Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Thr Val Glu Gln Asp Ser Gly Asn Leu Lys Val Asn
85 90 95

Pro Lys Ala Pro Leu Gln Val Ala Thr Asp Asn Gln Leu Glu Ile Ser
100 105 110

Leu Ala Asp Pro Phe Glu Val Lys Asn Lys Lys Leu Ser Leu Lys Val
115 120 125

Gly His Gly Leu Lys Val Ile Asp Glu Asn Ile Ser Thr Leu Gln Gly
130 135 140

Leu Leu Gly Asn Leu Val Val Leu Thr Gly Met Gly Ile Gly Thr Glu
145 150 155 160

Glu Leu Lys Lys Asp Asp Lys Ile Val Gly Ser Ala Val Asn Val Arg
165 170 175

Leu Gly Gln Asp Gly Gly Leu Thr Phe Asp Lys Lys Gly Asp Leu Val
180 185 190

Ala Trp Asn Lys Glu Asn Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp
195 200 205

Pro Ser Pro Asn Cys Lys Val Ser Glu Glu Lys Asp Ser Lys Leu Thr
210 215 220

Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Ser Val Ser Leu
225 230 235 240

Leu Val Val Lys Gly Lys Phe Ala Asn Ile Asn Asn Lys Thr Asn Pro
245 250 255

Gly Glu Asp Tyr Lys Xaa Phe Ser Val Lys Leu Leu Phe Asp Ala Asn
260 265 270

Gly Lys Leu Leu Thr Gly Ser Ser Leu Asp Gly Asn Tyr Trp Asn Tyr
275 280 285

Lys Asn Lys Asp Ser Val Ile Gly Ser Pro Tyr Glu Asn Ala Val Pro
290 295 300

Phe Met Pro Asn Ser Thr Ala Tyr Pro Lys Ile Ile Asn Gly Thr Ala
305 310 315 320

Asn Pro Glu Asp Lys Lys Ser Ala Ala Lys Lys Thr Ile Val Thr Asn
325 330 335

Val Tyr Leu Gly Gly Asp Ala Ala Lys Pro Val Ala Thr Thr Ile Ser
340 345 350

Phe Asn Lys Glu Thr Glu Ser Asn Cys Val Tyr Ser Ile Thr Phe Asp
355 360 365

Phe Ala Trp Asn Lys Thr Trp Lys Asn Val Pro Phe Asp Ser Ser Ser
370 375 380

Leu Thr Phe Ser Tyr Ile Ala Gln Glu
385 390

<210> 42
<211> 353
<212> PRT
<213> Human Adenovirus 51 Fiber Protein

<400> 42
Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
1 5 10 15

Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
20 25 30

Glu Asp Glu Ser Thr Ser Gln His Pro Phe Ile Asn Pro Gly Phe Ile
35 40 45

Ser Pro Asn Gly Phe Thr Gln Ser Pro Asp Gly Val Leu Thr Leu Asn
50 55 60

Cys Leu Thr Pro Leu Thr Thr Thr Gly Gly Pro Leu Gln Leu Lys Val
65 70 75 80

Gly Gly Gly Leu Ile Val Asp Asp Thr Asp Gly Thr Leu Gln Glu Asn
85 90 95

Ile Arg Val Thr Ala Pro Ile Thr Lys Asn Asn His Ser Val Glu Leu
100 105 110

Ser Ile Gly Asn Gly Leu Glu Thr Gln Asn Asn Lys Leu Cys Ala Lys
115 120 125

Leu Gly Asn Gly Leu Lys Phe Asn Asn Gly Asp Ile Cys Ile Lys Asp
130 135 140

Ser Ile Asn Thr Leu Trp Thr Gly Ile Lys Pro Pro Pro Asn Cys Gln
145 150 155 160

Ile Val Glu Asn Thr Asp Thr Asn Asp Gly Lys Leu Thr Leu Val Leu
165 170 175

Val Lys Asn Gly Gly Leu Val Asn Gly Tyr Val Ser Leu Val Gly Val
180 185 190

Ser Asp Thr Val Asn Gln Met Phe Thr Gln Lys Ser Ala Thr Ile Gln
195 200 205

Leu Arg Leu Tyr Phe Asp Ser Ser Gly Asn Leu Leu Thr Asp Glu Ser
210 215 220

Asn Leu Lys Ile Pro Leu Lys Asn Lys Ser Ser Thr Ala Thr Ser Glu
225 230 235 240

Ala Ala Thr Ser Ser Lys Ala Phe Met Pro Ser Thr Thr Ala Tyr Pro
245 250 255

Phe Asn Thr Thr Thr Arg Asp Ser Glu Asn Tyr Ile His Gly Ile Cys
260 265 270

Tyr Tyr Met Thr Ser Tyr Asp Arg Ser Leu Val Pro Leu Asn Ile Ser
275 280 285

Ile Met Leu Asn Ser Arg Thr Ile Ser Ser Asn Val Ala Tyr Ala Ile
290 295 300

Gln Phe Glu Trp Asn Leu Asn Ala Lys Glu Ser Pro Glu Ser Asn Ile
305 310 315 320

Ala Thr Leu Thr Thr Ser Pro Phe Phe Phe Ser Tyr Ile Ile Glu Asp
325 330 335

Thr Thr Lys Cys Ile Ser Leu Cys Tyr Val Ser Thr Cys Leu Phe Phe
340 345 350

Asn

<210> 43
<211> 958
<212> PRT
<213> Human Adenovirus 34 Hexon Protein

<400> 43
Leu Ser Arg Arg Ala Pro Gly Phe Pro Leu Val Lys Met Ala Thr Pro
1 5 10 15

Ser Met Leu Pro Gln Trp Ala Tyr Met His Ile Ala Gly Gln Asp Ala
20 25 30

Ser Glu Tyr Leu Ser Pro Gly Leu Val Gln Phe Ala Arg Ala Thr Asp
35 40 45

Thr Tyr Val Asn Leu Gly Asn Lys Phe Arg Asn Pro Thr Val Ala Pro
50 55 60

Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu Met Leu Arg Phe
65 70 75 80

Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr Lys Val Arg Tyr
85 90 95

Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met Ala Ser Thr Phe
100 105 110

Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Ser Phe Lys Pro Tyr
115 120 125

Ser Gly Thr Ala Tyr Asn Ser Leu Ala Pro Lys Gly Ala Pro Asn Ala
130 135 140

Ser Gln Trp Leu Asp Lys Gly Val Thr Ser Thr Gly Leu Val Asp Asp
145 150 155 160

Gly Asn Thr Thr Asp Asp Gly Glu Glu Ala Lys Lys Ala Thr Tyr Thr
165 170 175

Phe Gly Asn Ala Pro Val Lys Ala Glu Ala Glu Ile Thr Lys Asp Gly
180 185 190

Leu Pro Val Gly Leu Glu Val Ser Thr Glu Gly Pro Lys Pro Ile Tyr
195 200 205

Ala Asp Lys Leu Tyr Gln Pro Glu Pro Gln Val Gly Asp Glu Thr Trp
210 215 220

Thr Asp Leu Asp Gly Lys Thr Glu Glu Tyr Gly Gly Arg Val Leu Lys
225 230 235 240

Pro Glu Thr Lys Met Lys Pro Cys Tyr Gly Ser Phe Ala Lys Pro Thr
245 250 255

Asn Ile Lys Gly Gly Gln Ala Lys Val Lys Pro Lys Glu Asp Asp Gly
260 265 270

Thr Asn Asn Ile Glu Tyr Asp Ile Asp Met Asn Phe Phe Asp Leu Arg
275 280 285

Ser Gln Arg Ser Glu Leu Lys Pro Lys Ile Val Met Tyr Ala Glu Asn
290 295 300

Val Asp Leu Glu Cys Pro Asp Thr His Val Val Tyr Lys Pro Gly Val
305 310 315 320

Ser Asp Ala Ser Ser Glu Thr Asn Leu Gly Gln Gln Ser Met Pro Asn
325 330 335

Arg Pro Asn Tyr Ile Gly Phe Arg Asp Asn Phe Ile Gly Leu Met Tyr
340 345 350

Tyr Asn Ser Thr Gly Asn Met Gly Val Leu Ala Gly Gln Ala Ser Gln
355 360 365

Leu Asn Ala Val Val Asp Leu Gln Asp Arg Asn Thr Glu Leu Ser Tyr
370 375 380

Gln Leu Leu Asp Ser Leu Gly Asp Arg Thr Arg Tyr Phe Ser Met Trp
385 390 395 400

Asn Gln Ala Val Asp Ser Tyr Asp Pro Asp Val Arg Val Ile Glu Asn
405 410 415

His Gly Val Glu Asp Glu Leu Pro Asn Tyr Cys Phe Pro Leu Asp Gly
420 425 430

Val Gly Pro Arg Thr Asp Ser Tyr Lys Glu Ile Lys Pro Asn Gly Asp
435 440 445

Gln Ser Thr Trp Thr Asn Val Asp Pro Thr Gly Ser Ser Glu Leu Ala
450 455 460

Lys Gly Asn Pro Phe Ala Met Glu Ile Asn Leu Gln Ala Asn Leu Trp
465 470 475 480

Arg Ser Phe Leu Tyr Ser Asn Val Ala Leu Tyr Leu Pro Asp Ser Tyr
485 490 495

Lys Tyr Thr Pro Ser Asn Val Thr Leu Pro Glu Asn Lys Asn Thr Tyr
500 505 510

Asp Tyr Met Asn Gly Arg Val Val Pro Pro Ser Leu Val Asp Thr Tyr
515 520 525

Val Asn Ile Gly Ala Arg Trp Ser Leu Asp Ala Met Asp Asn Val Asn
530 535 540

Pro Phe Asn His His Arg Asn Ala Gly Leu Arg Tyr Arg Ser Met Leu
545 550 555 560

Leu Gly Asn Gly Arg Tyr Val Pro Phe His Ile Gln Val Pro Gln Lys
565 570 575

Phe Phe Ala Val Lys Asn Leu Leu Leu Leu Pro Gly Ser Tyr Thr Tyr
580 585 590

Glu Trp Asn Phe Arg Lys Asp Val Asn Met Val Leu Gln Ser Ser Leu
595 600 605

Gly Asn Asp Leu Arg Val Asp Gly Ala Ser Ile Ser Phe Thr Ser Ile
610 615 620

Asn Leu Tyr Ala Thr Phe Phe Pro Met Ala His Asn Thr Ala Ser Thr
625 630 635 640

Leu Glu Ala Met Leu Arg Asn Asp Thr Asn Asp Gln Ser Phe Asn Asp
645 650 655

Tyr Leu Ser Ala Ala Asn Met Leu Tyr Pro Ile Pro Ala Asn Ala Thr
660 665 670

Asn Ile Pro Ile Ser Ile Pro Ser Arg Asn Trp Ala Ala Phe Arg Gly
675 680 685

Trp Ser Phe Thr Arg Leu Lys Thr Lys Glu Thr Pro Ser Leu Gly Ser
690 695 700

Gly Phe Asp Pro Tyr Phe Val Tyr Ser Gly Ser Ile Pro Leu Asp Gly
705 710 715 720

Thr Phe Tyr Leu Asn His Thr Phe Lys Lys Val Ser Ile Met Phe Asp
725 730 735

Ser Ser Val Ser Trp Pro Gly Asn Asp Arg Leu Leu Ser Pro Asn Glu
740 745 750

Phe Glu Ile Lys Arg Thr Val Asp Gly Glu Gly Tyr Asn Val Ala Gln
755 760 765

Cys Asn Met Thr Asp Trp Phe Leu Val Gln Met Leu Ala Asn Tyr Asn
770 775 780

Ile Gly Tyr Gln Gly Phe Tyr Ile Pro Glu Gly Tyr Lys Asp Arg Met
785 790 795 800

Tyr Ser Phe Phe Arg Asn Phe Gln Pro Met Ser Arg Gln Val Val Asp
805 810 815

Glu Val Asn Lys Tyr Asp Phe Lys Ala Val Ile Pro Tyr Gln His Asn
820 825 830

Asn Ser Gly Phe Val Gly Tyr Met Ala Pro Thr Met Arg Gln Gly Gln
835 840 845

Tyr Pro Ala Asn Tyr Pro Tyr Pro Leu Ile Gly Thr Thr Ala Val Asn
850 855 860

Ser Val Thr Gln Lys Lys Phe Leu Cys Asp Arg Thr Met Trp Arg Ile
865 870 875 880

Pro Phe Ser Ser Asn Phe Met Ser Met Gly Ala Leu Thr Asp Leu Gly
885 890 895

Gln Asn Met Leu Tyr Ala Asn Ser Ala His Ala Leu Asp Met Thr Phe
900 905 910

Glu Val Asp Pro Met Asp Glu Pro Thr Leu Leu Tyr Leu Leu Phe Glu
915 920 925

Val Phe Asp Val Val Arg Val Gln Pro His Arg Gly Ile Ile Glu Ala
930 935 940

Val Tyr Leu Arg Thr Pro Phe Ser Ala Gly Asn Ala Thr Thr
945 950 955

<210> 44
<211> 946
<212> PRT
<213> Human Adenovirus 35 Hexon Protein

<400> 44
Leu Ser Arg Arg Ala Pro Gly Phe Pro Leu Val Lys Met Ala Thr Pro
1 5 10 15

Ser Met Leu Pro Gln Trp Ala Tyr Met His Ile Ala Gly Gln Asp Ala
20 25 30

Ser Glu Tyr Leu Ser Pro Gly Leu Val Gln Phe Ala Arg Ala Thr Asp
35 40 45

Thr Tyr Phe Asn Leu Gly Asn Lys Phe Arg Asn Pro Thr Val Ala Pro
50 55 60

Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu Met Leu Arg Phe
65 70 75 80

Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr Lys Val Arg Tyr
85 90 95

Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met Ala Ser Thr Phe
100 105 110

Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Ser Phe Lys Pro Tyr
115 120 125

Ser Gly Thr Ala Tyr Asn Ser Leu Ala Pro Lys Gly Ala Pro Asn Ala
130 135 140

Ser Gln Trp Leu Asp Lys Gly Val Thr Ser Thr Gly Leu Val Asp Asp
145 150 155 160

Gly Asn Thr Asp Asp Gly Glu Glu Ala Lys Lys Ala Thr Tyr Thr Phe
165 170 175

Gly Asn Ala Pro Val Lys Ala Glu Ala Glu Ile Thr Lys Asp Gly Leu
180 185 190

Pro Val Gly Leu Glu Val Ser Thr Glu Gly Pro Lys Pro Ile Tyr Ala
195 200 205

Asp Lys Leu Tyr Gln Pro Glu Pro Gln Val Gly Asp Thr Trp Thr Asp
210 215 220

Leu Asp Gly Lys Thr Glu Glu Tyr Gly Gly Arg Val Leu Lys Pro Glu
225 230 235 240

Thr Lys Met Lys Pro Cys Tyr Gly Ser Phe Ala Lys Pro Thr Asn Ile
245 250 255

Lys Gly Gly Gln Ala Lys Val Lys Pro Lys Glu Asp Asp Gly Thr Asn
260 265 270

Asn Ile Tyr Asp Ile Asp Met Asn Phe Phe Asp Leu Arg Ser Gln Arg
275 280 285

Ser Glu Leu Lys Pro Lys Ile Val Met Tyr Ala Glu Asn Val Asp Leu
290 295 300

Glu Cys Pro Asp Thr His Val Val Tyr Lys Pro Gly Val Ser Asp Ala
305 310 315 320

Ser Ser Glu Thr Asn Leu Gly Gln Gln Met Pro Asn Arg Pro Asn Tyr
325 330 335

Ile Gly Phe Arg Asp Asn Phe Ile Gly Leu Met Tyr Tyr Asn Ser Thr
340 345 350

Gly Asn Met Gly Val Leu Ala Gly Gln Ala Ser Gln Leu Asn Ala Val
355 360 365

Val Asp Leu Gln Asp Arg Asn Thr Glu Leu Ser Tyr Gln Leu Leu Leu
370 375 380

Ser Leu Gly Asp Arg Thr Arg Tyr Phe Ser Met Trp Asn Gln Ala Val
385 390 395 400

Asp Ser Tyr Asp Pro Asp Val Arg Val Ile Glu Asn His Gly Val Glu
405 410 415

Asp Glu Leu Pro Asn Tyr Cys Phe Pro Leu Asp Gly Val Gly Pro Arg
420 425 430

Thr Asp Ser Tyr Lys Glu Ile Pro Asn Gly Asp Gln Ser Thr Trp Thr
435 440 445

Asn Val Asp Pro Thr Gly Ser Ser Glu Leu Ala Lys Gly Asn Pro Phe
450 455 460

Ala Met Glu Ile Asn Leu Gln Ala Asn Leu Trp Arg Ser Phe Leu Tyr
465 470 475 480

Ser Asn Val Ala Leu Tyr Leu Pro Asp Ser Tyr Lys Tyr Thr Ser Asn
485 490 495

Val Thr Leu Pro Glu Asn Lys Asn Thr Tyr Asp Tyr Met Asn Gly Arg
500 505 510

Val Val Pro Pro Ser Leu Val Asp Thr Tyr Val Asn Ile Gly Ala Arg
515 520 525

Trp Ser Leu Asp Ala Met Asp Asn Val Asn Pro Phe Asn His His Arg
530 535 540

Asn Ala Gly Arg Tyr Arg Ser Met Leu Leu Gly Asn Gly Arg Tyr Val
545 550 555 560

Pro Phe His Ile Gln Val Pro Gln Lys Phe Phe Ala Val Lys Asn Leu
565 570 575

Leu Leu Leu Pro Gly Ser Tyr Thr Tyr Glu Trp Asn Phe Arg Lys Asp
580 585 590

Val Asn Met Val Leu Gln Ser Ser Leu Asp Leu Arg Val Asp Gly Ala
595 600 605

Ser Ile Ser Phe Thr Ser Ile Asn Leu Tyr Ala Thr Phe Phe Pro Met
610 615 620

Ala His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg Asn Asp Thr
625 630 635 640

Asn Asp Gln Ser Phe Asn Asp Tyr Leu Ser Ala Ala Asn Met Leu Tyr
645 650 655

Pro Ile Ala Asn Ala Thr Asn Ile Pro Ile Ser Ile Pro Ser Arg Asn
660 665 670

Trp Ala Ala Phe Arg Gly Trp Phe Thr Arg Leu Lys Thr Lys Glu Thr
675 680 685

Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val Tyr Ser Gly Ser
690 695 700

Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu His Thr His Lys Lys Val
705 710 715 720

Ser Ile Met Phe Asp Ser Ser Val Ser Trp Pro Gly Asn Asp Arg Leu
725 730 735

Leu Ser Pro Asn Glu Phe Glu Ile Lys Arg Thr Val Asp Gly Glu Gly
740 745 750

Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp Trp Phe Leu Val Trp
755 760 765

Leu Ala Asn Tyr Asn Ile Gly Tyr Gln Gly Phe Tyr Ile Pro Glu Gly
770 775 780

Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn Phe Gln Pro Met Ser
785 790 795 800

Arg Gln Val Val Asp Glu Val Asn Tyr Lys Asp Phe Lys Ala Val Ala
805 810 815

Ile Pro Tyr Gln His Asn Asn Gly Phe Val Gly Tyr Met Ala Pro Thr
820 825 830

Met Arg Gln Gly Gln Pro Tyr Pro Ala Asn Tyr Pro Tyr Pro Leu Ile
835 840 845

Gly Thr Thr Ala Val Asn Ser Val Thr Gln Lys Lys Phe Leu Cys Asp
850 855 860

Arg Thr Met Trp Arg Ile Pro Phe Ser Ser Asn Phe Met Ser Ala Leu
865 870 875 880

Thr Asp Leu Gly Gln Asn Met Leu Tyr Ala Asn Ser Ala His Ala Leu
885 890 895

Asp Met Thr Phe Glu Val Asp Pro Met Asp Glu Pro Thr Leu Leu Tyr
900 905 910

Leu Leu Phe Glu Val Phe Asp Val Val Arg Val His Gln Pro His Arg
915 920 925

Gly Ile Ile Glu Ala Val Leu Arg Thr Pro Phe Ser Ala Gly Asn Ala
930 935 940

Thr Thr
945

<210> 45
<211> 952

<212> PRT
<213> Human Adenovirus 36 Hexon Protein

<400> 45
Leu Ser Arg Arg Ala Pro Gly Phe Pro Leu Val Lys Met Ala Thr Pro
1 5 10 15

Ser Met Leu Pro Gln Trp Ala Tyr Met His Ile Ala Gly Gln Asp Ala
20 25 30

Ser Glu Tyr Leu Ser Pro Gly Leu Val Gln Phe Ala Arg Ala Thr Asp
35 40 45

Thr Tyr Phe Asn Leu Gly Asn Lys Phe Arg Asn Pro Thr Val Ala Pro
50 55 60

Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu Met Leu Arg Phe
65 70 75 80

Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr Lys Val Arg Tyr
85 90 95

Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met Ala Ser Thr Phe
100 105 110

Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Ser Phe Lys Pro Tyr
115 120 125

Ser Gly Thr Ala Tyr Asn Ser Leu Ala Pro Lys Gly Ala Pro Asn Ala
130 135 140

Ser Gln Trp Leu Asp Lys Gly Val Thr Ser Thr Gly Leu Val Asp Asp
145 150 155 160

Gly Asn Thr Asp Asp Gly Glu Glu Ala Lys Lys Ala Thr Tyr Thr Phe
165 170 175

Gly Asn Ala Pro Val Lys Ala Glu Ala Glu Ile Thr Lys Asp Gly Leu
180 185 190

Pro Val Gly Leu Glu Val Ser Thr Glu Gly Pro Lys Pro Ile Tyr Ala
195 200 205

Asp Lys Leu Tyr Gln Pro Glu Pro Gln Val Gly Asp Thr Trp Thr Asp
210 215 220

Leu Asp Gly Lys Thr Glu Glu Tyr Gly Gly Arg Val Leu Lys Pro Glu
225 230 235 240

Thr Lys Met Lys Pro Cys Tyr Gly Ser Phe Ala Lys Pro Thr Asn Ile
245 250 255

Lys Gly Gly Gln Ala Lys Val Lys Pro Lys Glu Asp Asp Gly Thr Asn
260 265 270

Asn Ile Tyr Asp Ile Asp Met Asn Phe Phe Asp Leu Arg Ser Gln Arg
275 280 285

Ser Glu Leu Lys Pro Lys Ile Val Met Tyr Ala Glu Asn Val Asp Leu
290 295 300

Glu Cys Pro Asp Thr His Val Val Tyr Lys Pro Gly Val Ser Asp Ala
305 310 315 320

Ser Ser Glu Thr Asn Leu Gly Gln Gln Ser Met Pro Asn Arg Pro Asn
325 330 335

Tyr Ile Gly Phe Arg Asp Asn Phe Ile Gly Leu Met Tyr Tyr Asn Ser
340 345 350

Thr Gly Asn Met Gly Val Leu Ala Gly Gln Ala Ser Gln Leu Asn Ala
355 360 365

Val Val Asp Leu Gln Asp Arg Asn Thr Glu Leu Ser Tyr Gln Leu Leu
370 375 380

Asp Ser Leu Gly Asp Arg Thr Arg Tyr Phe Ser Met Trp Asn Gln Ala
385 390 395 400

Val Asp Ser Tyr Asp Pro Asp Val Arg Val Ile Glu Asn His Gly Val
405 410 415

Glu Asp Glu Leu Pro Asn Tyr Cys Phe Pro Leu Asp Gly Val Gly Pro
420 425 430

Arg Thr Asp Ser Tyr Lys Ile Lys Pro Asn Gly Asp Gln Ser Thr Trp
435 440 445

Thr Asn Val Asp Pro Thr Gly Ser Ser Glu Leu Ala Lys Gly Asn Pro
450 455 460

Phe Ala Met Glu Ile Asn Leu Gln Ala Asn Leu Trp Arg Ser Phe Leu
465 470 475 480

Tyr Ser Asn Val Ala Leu Tyr Leu Pro Asp Ser Tyr Lys Tyr Thr Pro
485 490 495

Ser Asn Val Thr Leu Pro Glu Asn Lys Asn Thr Tyr Asp Tyr Met Asn
500 505 510

Gly Arg Val Val Pro Pro Ser Leu Val Asp Thr Tyr Val Asn Ile Gly
515 520 525

Ala Arg Trp Ser Leu Asp Ala Met Asp Asn Val Asn Pro Phe Asn His
530 535 540

His Arg Ala Gly Leu Arg Tyr Arg Ser Met Leu Leu Gly Asn Gly Arg
545 550 555 560

Tyr Val Pro Phe His Ile Gln Val Pro Gln Lys Phe Phe Ala Val Lys
565 570 575

Asn Leu Leu Leu Leu Pro Gly Ser Tyr Thr Tyr Glu Trp Asn Phe Arg
580 585 590

Lys Asp Val Asn Met Val Leu Gln Ser Leu Gly Asn Asp Leu Arg Val
595 600 605

Asp Gly Ala Ser Ile Ser Phe Thr Ser Ile Asn Leu Tyr Ala Thr Phe
610 615 620

Phe Pro Met Ala His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg
625 630 635 640

Asn Asp Thr Asn Asp Gln Ser Phe Asn Asp Tyr Leu Ser Ala Ala Asn
645 650 655

Met Leu Tyr Pro Ile Pro Ala Asn Ala Thr Asn Ile Pro Ile Ser Ile
660 665 670

Pro Ser Arg Asn Trp Ala Ala Phe Arg Gly Trp Ser Phe Thr Arg Leu
675 680 685

Lys Thr Lys Glu Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe
690 695 700

Val Tyr Ser Gly Ser Ile Pro Tyr Asp Gly Thr Phe Tyr Leu Asn His
705 710 715 720

Thr Phe Lys Lys Val Ser Ile Met Phe Asp Ser Ser Val Ser Trp Pro
725 730 735

Gly Asn Asp Arg Leu Leu Ser Pro Asn Glu Phe Glu Ile Lys Arg Thr
740 745 750

Val Asp Gly Asp Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Trp
755 760 765

Phe Leu Val Gln Met Leu Ala Asn Tyr Asn Ile Gly Tyr Gln Gly Phe
770 775 780

Tyr Ile Pro Glu Gly Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn
785 790 795 800

Phe Gln Pro Met Ser Arg Gln Val Val Asp Glu Val Asn Tyr Lys Asp
805 810 815

Phe Lys Ala Val Ile Tyr Gln His Asn Asn Ser Gly Phe Val Gly Tyr
820 825 830

Met Ala Pro Thr Met Arg Gln Gly Gln Pro Tyr Pro Ala Asn Tyr Pro
835 840 845

Tyr Pro Leu Ile Gly Thr Thr Ala Val Asn Ser Val Thr Gln Lys Lys
850 855 860

Phe Leu Cys Asp Arg Thr Met Trp Arg Ile Pro Phe Ser Ser Asn Phe
865 870 875 880

Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Met Leu Tyr Ala
885 890 895

Asn Ser Ala His Ala Leu Asp Met Thr Phe Glu Val Asp Pro Met Asp
900 905 910

Glu Pro Thr Leu Leu Tyr Leu Leu Phe Glu Val Phe Asp Val Val Arg
915 920 925

Val Gln Pro His Arg Gly Ile Ile Glu Ala Val Tyr Leu Arg Thr Pro
930 935 940

Phe Ser Ala Gly Asn Ala Thr Thr
945 950

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Ala Tyr Met His Ile Ala Gly Gln Asp Ala Ser Glu Tyr Leu Ser Pro
35 40 45

Gly Leu Val Gln Phe Ala Arg Ala Thr Asp Thr Tyr Phe Ser Leu Gly
50 55 60

Asn Lys Phe Arg Asn Pro Thr Val Ala Pro Thr His Asp Val Thr Thr
65 70 75 80

Asp Arg Ser Gln Arg Leu Thr Leu Arg Phe Ser Pro Ser Asp Arg Glu
85 90 95

Asp Thr Thr Tyr Ser Tyr Lys Ala Arg Phe Thr Leu Ala Gly Asp Asn
100 105 110

Arg Val Leu Asp Met Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu
115 120 125

Asp Arg Gly Pro Ser Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ser
130 135 140

Leu Ala Pro Lys Gly Ala Pro Asn Ser Ser Gln Trp Ala Asp Lys Glu
145 150 155 160

Arg Val Asn Gly Gly Gly Asn Thr Lys Asp Val Thr Lys Thr Phe Gly
165 170 175

Val Ala Ala Met Gly Gly Glu Asp Ile Thr Glu Lys Gly Leu Lys Ile
180 185 190

Gly Thr Asp Thr Thr Ala Asn Glu Pro Ile Phe Ala Asp Lys Asn Phe
195 200 205

Gln Pro Glu Pro Gln Val Gly Glu Glu Asn Gln Glu Thr Phe Val Phe
210 215 220

Tyr Gly Gly Arg Ala Leu Lys Lys Glu Thr Lys Met Lys Pro Cys Tyr
225 230 235 240

Gly Ser Phe Ala Arg Pro Thr Asn Glu Lys Gly Gly Gln Ala Lys Phe
245 250 255

Ile Ile Gly Asp Asn Gly Gln Pro Thr Glu Asn His Asp Ile Thr Met
260 265 270

Ala Phe Asp Thr Pro Gly Gly Thr Ile Thr Gly Gly Thr Gly Gly Pro
275 280 285

Gln Asp Glu Leu Lys Ala Asp Ile Val Met Tyr Thr Glu Asn Ile Asn
290 295 300

Leu Glu Thr Pro Asp Thr His Val Val Tyr Lys Pro Gly Lys Glu Asp
305 310 315 320

Asp Ser Ser Glu Ile Asn Leu Val Gln Ser Met Pro Asn Arg Pro Asn
325 330 335

Tyr Ile Gly Phe Arg Asp Asn Phe Val Gly Leu Met Tyr Tyr Asn Ser
340 345 350

Thr Gly Asn Met Gly Val Leu Ala Gly Gln Ala Ser Gln Leu Asn Ala
355 360 365

Val Val Asp Leu Gln Asp Arg Asn Thr Glu Leu Ser Tyr Gln Leu Leu
370 375 380

Asp Ser Leu Gly Asp Arg Thr Arg Tyr Phe Ser Met Trp Asn Ser Ala
385 390 395 400

Val Asp Ser Tyr Asp Pro Asp Val Arg Ile Ile Glu Asn His Gly Val
405 410 415

Glu Asp Glu Leu Pro Asn Tyr Cys Phe Pro Leu Asp Gly Ser Gly Thr
420 425 430

Asn Ser Ala Phe Gln Gly Lys Ile Lys Gln Asn Gln Asp Gly Asp Val
435 440 445

Asn Asp Asp Trp Glu Lys Asp Asp Lys Val Ser Thr Gln Asn Gln Ile
450 455 460

Cys Lys Gly Asn Glu Tyr Ala Met Glu Ile Asn Leu Gln Ala Asn Leu
465 470 475 480

Trp Lys Ser Phe Leu Tyr Ser Asn Val Ala Leu Tyr Leu Asp Ser Tyr
485 490 495

Lys Tyr Thr Pro Ala Asn Val Thr Leu Pro Thr Asn Thr Asn Thr Glu
500 505 510

Tyr Met Asn Gly Arg Val Val Ala Pro Ser Leu Val Asp Ala Tyr Ile
515 520 525

Asn Ile Gly Ala Arg Trp Ser Leu Asp Pro Met Asp Asn Val Asn Pro
530 535 540

Phe Asn His Arg Asn Ala Gly Leu Arg Tyr Arg Ser Asn Ala Ser Gly
545 550 555 560

Gln Arg Pro Leu Arg Ala Leu Pro His Pro Ser Ala Pro Lys Val Leu
565 570 575

Cys His Gln Glu Pro Ala Pro Ala Pro Gly Leu Leu His Leu Arg Val
580 585 590

Glu Leu Pro Gln Gly Arg Gln His Asp Ala Glu Phe Pro Arg Lys Arg
595 600 605

Pro Ala Arg Arg Arg Arg Leu Arg Ala Leu Arg Gln Arg Gln Pro Leu
610 615 620

Cys His Ile Leu Pro His Gly Ala Gln His Arg Leu His Pro Gly Ser
625 630 635 640

His Ala Ala Gln Arg His Gln Arg Pro Val Leu Gln Arg Leu Pro Leu
645 650 655

Arg Gln His Ala Leu Pro His Pro Gly Gln Gly His Gln Arg Ala His
660 665 670

Leu His Pro Ala Gln Leu Gly Arg Leu Ser Arg Leu Glu Phe His Pro
675 680 685

Ala Gln Asp Gln Gly Asn Ser Phe Pro Arg Leu Gly Phe Arg Pro Leu
690 695 700

Leu Cys Leu Leu Gly Leu His Pro Leu Pro Arg Arg Asp Leu Leu Pro
705 710 715 720

Gln Pro His Leu Gln Glu Gly Leu His His Val Arg Leu Leu Gly Gln
725 730 735

Leu Ala Arg Gln Arg Thr Ala Val Thr Pro Asn Glu Phe Glu Ile Lys
740 745 750

Arg Ser Val Asp Gly Glu Gly Tyr Asn Val Ala Gln Cys Met Thr Lys
755 760 765

Asp Trp Phe Leu Val Gln Met Leu Ser His Tyr Asn Ile Gly Tyr Gln
770 775 780

Gly Phe His Val Pro Glu Gly Tyr Lys Asp Arg Met Tyr Ser Phe Phe
785 790 795 800

Arg Asn Phe Gln Pro Met Ser Arg Gln Val Val Asp Glu Ile Asn Tyr
805 810 815

Lys Asp Tyr Ala Val Thr Leu Pro Phe Gln His Asn Asn Ser Gly Phe
820 825 830

Thr Gly Tyr Leu Ala Pro Thr Met Arg Gln Gly Gln Pro Tyr Pro Ala
835 840 845

Asn Phe Pro Leu Ile Gly Ser Thr Ala Val Pro Ser Val Thr Gln Lys
850 855 860

Lys Phe Leu Cys Asp Arg Val Met Trp Arg Ile Pro Phe Ser Ser Asn
865 870 875 880

Phe Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Met Leu Tyr
885 890 895

Ala Asn Ser Ala His Ala Leu Asp Ile Thr Phe Glu Val Asp Pro Met
900 905 910

Asp Glu Pro Thr Leu Leu Tyr Leu Leu Phe Glu Val Phe Asp Val Val
915 920 925

Val His Gln Pro His Arg Gly Val Ile Glu Ala Val Tyr Leu Arg Thr
930 935 940

Pro Phe Ser Ala Gly Asn Ala Thr Thr
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<210> 49
<211> 64
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atcg 64

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<400> 50
gcgccaccat gggcagagcg atggtggc 28

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<212> DNA
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<211> 21
<212> DNA
<213> Primer/Oligonucleotide

<400> 52
gggtattagg ccaaaggcgc a 21

<210> 53
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<212> DNA
<213> Primer/Oligonucleotide

<400> 53
gatcccatgg aagcttgggt ggcgacccca gcg 33

<210> 54
<211> 36
<212> DNA
<213> Primer/Oligonucleotide

<400> 54
gatcccatgg ggatccttta ctaagttaca aagcta 36

<210> 55
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<213> Primer/Oligonucleotide

<400> 55
gtcgctgtag ttggactgg 19

<210> 56
<211> 42
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<400> 56
cgacatatgt agatgcatta gtttgtgtta tgtttcaacg tg 42

<210> 57
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<212> DNA
<213> Primer/Oligonucleotide

<400> 57
ggagaccact gccatgtt 18

<210> 58
<211> 47
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ctgtacgtac cagtgcactg gcctaggcat ggaaaaatac ataactg 47

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<211> 64
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atcg 64

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gcgccaccat gggcagagcg atggtggc 28

<210> 61
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gttagatcta agcttgtcga catcgatcta ctaacagtag agatgtagaa 50

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<400> 62
ttaagtcgac 10

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<400> 63
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<400> 64
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ccggatccac tagtggaaag cgggcgcgcg 30

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<400> 68
gagaagggca tggaggctg 19

<210> 69
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ccatcgatgg ttatgtkgtk gcgttrccgg c 31

<210> 71
<211> 20
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<400> 71
ctgttgctgc tgctaatagc 20

<210> 72
<211> 32
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<400> 73
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<210> 74
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<210> 75
<211> 33
<212> DNA
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<210> 76
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<400> 76
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<210> 78
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gctcgactta agttaaaacg tgcggctaga cag 33

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aattgcggtt aattaagac 19